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THE POLICY OF EXPERIMENTAL STEWARDSHIP ON PUBLIC RANGELANDS

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THE POLICY OF EXPERIMENTAL STEWARDSHIP ON PUBLIC RANGELANDS

by

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As members of the Final Examination Committee, we certify that we have read the dissertation prepared by Donald W. Floyd entitled The Policy of Experimental Stewardship on Public Rangelands

and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

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Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copy of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

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ABSTRACT

Between July and September, 1985, 70 ranchers, environmentalists and agency officials participating in three chartered Experimental Stewardship Program (ESP) areas were interviewed. Committtee records and agency documents were also examined. As a result of the field work three conclusions were reached: 1) conflicts over grazing decisions have been significantly reduced by the stewardshhip process, 2) available data is insufficient to support conclusions about changes in the ecological status of the plant communities within the stewardshiip areas and 3) the annual economic value of rangeland recreation exceeds all other rangeland outputs on all thre areas studied.

CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

About every 40 years since 1890, federal land policy has undergone a period of dramatic change. The Forest Reserve Act of 1891 marked the beginning of a policy of retention and management of federal land resources. Both the National Forest and the National Park systems were eventually created as a result of this policy.

The 1930's brought significant changes to the remaining federal lands--the public domain. The Taylor Grazing Act of 1934 marked the end of the free use policy for millions of federal acres that were owned but essentially unmanaged. The administration of these lands eventually became the responsibility of the Bureau of Land Management (BLM, see Appendix 1 for a list of acronyms) after considerable political turmoil spread over fifteen years.

Forty years later, public land management experienced the peak of environmental activism. Between 1970 and 1976 the BLM and the public domain lands were reshaped by three major congressional efforts, an energy "crisis" and a suit by an environmental group that resulted in the preparation of 144 environmental impact statements and a fundamental

shift in the constituencies that the Bureau represents.

The National Forests were not immune to these pressures. Congress imposed new methods of planning, decision-making and administration on the Forest Service during the same period. But for reasons that are explored later in text, the Forest Service has weathered this period of activism differently than has the Bureau.

It is the suit by the Natural Resources Defense Council (NRDC v. Morton, 458 F 2d, 827 DC Cir. 1972) against the Bureau and the Department of the Interior over grazing management and the response of Congress (the Public Rangelands Improvement Act of 1978) that are particularly illustrative of the challenges and pitfalls facing the Bureau's land managers and interest groups. The suit challenged the adequacy of a programmatic environmental impact statement. A programatic impact statement examines a national effort. As such it does not consider local environments and local issues. The resulting ruling dramatically changed the relationships among environmental interest groups, livestock producers and public land managers.

Congress created the Experimental Stewardship Program in response to the turmoil caused by the changing relationships among competing interest groups. The program's stated objective is the "improvement" of public rangelands. But just as importantly, the stewardship

program seeks to resolve conflicts among user groups by substituting a strategy of intensive management for the extensive approach which has been traditional on public rangelands. See Figure 1 for a general map of the areas.

Theoretically, more intensive management will result in the production of additional resources. It is this additional production which allows stewardship to shift from **reallocation** of existing resources to **distribution** of additional resources. This shift to distributive politics avoids cutting livestock numbers, which the Bureau frequently recommended in allotment management plans and provides additional amenity values for environmental groups.

Stewardship is also an attempt to use incentives to secure sound resource management from livestock permitees and to improve communication among the many agencies directly and indirectly involved with agricultural and natural resource programs.

This analysis uses a case study approach to evaluate the stewardship policy. Three areas were formally chartered by the Secretaries of the Interior and Agriculture for the experiment. The three formally chartered stewardship areas are the focus of the research.

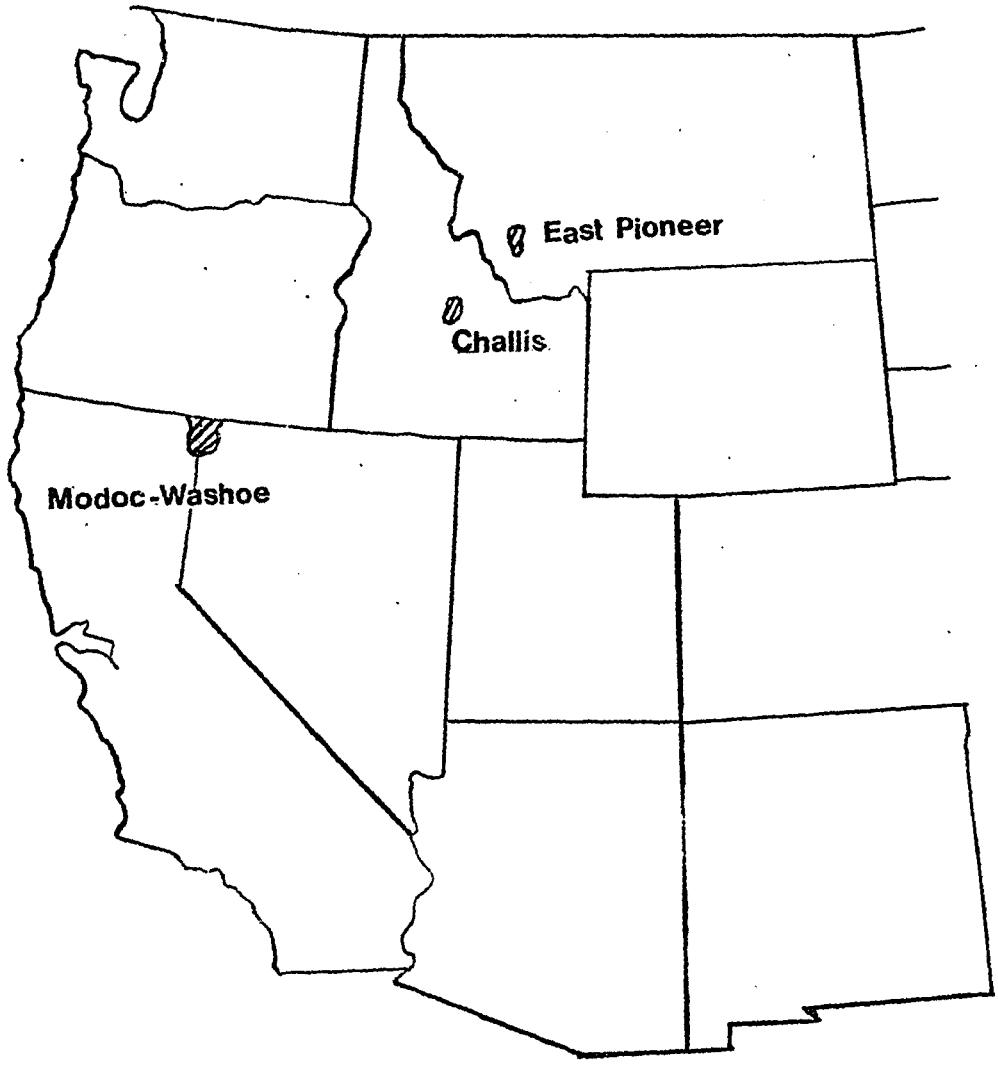

Figure 1

Two hypotheses are evaluated. First, the experimental stewardship program has reduced conflicts among competing user groups in the stewardship areas. Second, existing agency methods of evaluating range condition are inadequate for evaluating the stewardship programs management objectives.

The Case Study Approach

Information presented in this study is derived from personal interviews with the program participants and records maintained by the Bureau of Land Management and the U.S. Forest Service at area, district and forest offices.

In July, August and September, 1985, personal interviews were conducted with 70 Experimental Stewardship Program participants including agency managers, ranchers and representatives of environmental organizations in each of the three chartered stewardship areas (Modoc-Washoe, Challis and East Pioneer) and in the Randolph, Utah stewardship area. (See Appendix 3 for a list of interviewees).

The interviews varied in length from approximately 20 minutes to well over two hours. They consisted of open-ended conversations which were designed to elicit the opinions of the participants. All of the interviewees were assured anonymity if they so desired. Several individuals agreed to participate only upon this condition; others spoke for the record.

Over the course of the interview, each respondent was asked five "core questions" dealing with the hypotheses. The questions were: 1) "Have there been notable failures in the stewardship program?" 2) "Have there been notable successes in the stewardship program?" 3) "Has range condition improved?" 4) "How is change in range condition being monitored?" and 5) "Has the stewardship program reduced conflict?"

The interviews were not recorded. But immediately following the interview, detailed notes of the conversation including quotes, were entered in a journal. While this technique has its shortcomings, it is particularly valuable for dealing with members of rural communities who might speak less openly when confronted with a microphone or an individual taking notes.

Many of the interviews occurred in the field while touring allotments on horseback or in the cab of a pick-up. Several of the rancher interviews were conducted while we repaired fences, laid pipe for spring developments or took a break from putting up hay.

In the three chartered stewardship areas, agency managers made their records and personnel available for the research. At no time did the participants appear reluctant to speak their minds about the accomplishments and problems of the program. Several of the participants provided

written copies of statements they had made for hearings and conferences concerning the program.

In addition to the primary field work in the summer of 1985, I attended the presentations of many program participants at the Experimental Stewardship Conference in Reno, in October, 1984. Information gathered at this time was used to identify a list of issues. These issues formed the basis of many of the questions used in the interviews.

The field data are supplemented by transcripts of Congressional hearings and summaries of the proceedings of the Congressional Research Services's Rangeland Workshops which were held in Washington, D.C. in December, 1984 and January, 1985.

Much of the biological documentation is contained in the BLM's four grazing environmental impact statements which cover the chartered stewardship areas. An additional valuable source of information are the unpublished annual reports and minutes of the committee meetings which were provided to me by each of the stewardship committees.

A Review of Public Rangeland Policy Literature

The literature of public rangeland policy may be found in a virtual handful of works. While there are many others, the volumes reviewed here introduce the fundamental issues associated with Experimental Stewardship and the

problems raised in range policy in the last two decades.

It is the work of John Wesley Powell (1878) and his biographer Wallace Stegner (1954) that provide the necessary insight into the overwhelming importance of aridity in rangeland policy. More than any other factor, it is the failure of policy makers to understand the aridity of the west that created the problems with which managers are currently faced.

Will Barnes (1926) provides a detailed history of the early legislative proposals for organizing the public domain between 1899 and 1926. These efforts eventually led to the Taylor Grazing Act in 1934.

Samuel Osgood (1929) describes the development of the livestock industry in the late 1800's. His account of the bust of the 1880's and the futile attempts of the cattlemen to organize their grazing claims locally, provides important background to the development of federal management of livestock on the public lands.

The first assessment of the condition of public rangelands was completed in 1936 by the USDA. The Western Range (Senate Document 199) was by far the most detailed account of a "great but neglected natural resource." (p.xi). The report's estimates of range "depletion" are consistent with the agency's broader goal of wresting control of the public domain from the Department of the Interior's infant Grazing Service. This report also established the precedent

of using range condition assesments to further political agendas.

Louise Peffer (1951) provides a detailed account of early management and policies associated with grazing on national forests and the public domain. But it is the documentation of the McCarran hearings and the Barret hearings in the late 1940's that are most illustrative of the politics of public land management.

Samuel Hays' (1959) work is particularly useful in documenting the early administration of the forest reserves by the Department of the Interior and the controversies associated with rangeland leasing proposals of the first Roosevelt administration. Hays is also interesting because he places the development of public rangeland policy within the context of the early conservation movement.

Nineteen-sixty was a banner year for range policy literature. Herbert Kaufman (1960) advanced his capture-conformity argument in the administration of public lands. His work also deals directly with the issues of centralized and decentralized decision-making; a critical element in this study.

Phillip Foss (1960) contributes a work that is valuable to this study for its documentation of local decision-making by the grazing advisory boards in Oregon. His conclusions about the results of these policies bear directly on the

interest groups involved in the stewardship program particularly on the reluctance of environmental groups to whole-heartedly endorse the project.

Paul Gates (1968) offers the best available description of the experimental Mizpah-Pumpkin Creek grazing district. This effort in the late 1920's set an important precedent for the Taylor Grazing Act and the Experimental Stewardship Program. Gates' work is also significant for its documentation of the internecine warfare between USDI and USDA that continues to plague rangeland policy.

Sally Fairfax's revision of Samuel Dana (1980) provides a comprehensive recitation of the major issues in public land policy. Of particular interest in this study is her documentation of the impacts of the environmental policy of the 1970's on rangeland management. The development of judicial policy-making since the passage of NEPA plays an important role in the stewardship program and it is explored in more depth in Chapter 5.

One of the best works on public rangeland policy is an unpublished (but widely available) paper by Robert Nelson (1980), an economist in the Office of Policy Analysis at the USDI. "The New Range Wars: Environmentalists versus Cattlemen for the Public Rangelands" provides a concise history and analysis of the issues associated with public range management in the 1980's. The work is invaluable as a primer and for its well-drawn conclusions on the role of

science and economics in public land policy and management.

Paul Culhane (1981) is a valuable addition to Nelson's work in identifying the changes within BLM that have resulted from the multiple use mandate affirmed by FLPMA and in refuting the capture-conformity argument advanced by Kaufman. Culhane expertly explores local decision making and local interest group influence. While the work is not aimed directly at rangeland policy, it does deal directly with BLM and USFS management of rangelands and the associated interest groups that have a hand in their management.

One must acknowledge the extensive contributions of George Coggins (1981, 1982a, 1982b, 1982c, 1983 and 1984) to the field of public rangeland law. His five part series on range law has provided the basic guidance to jurists involved in rangeland litigation.

Finally, the 144 volumes of grazing EIS's produced by the BLM must be included here. These statements provide the site-specific detail necessary for understanding the potential of the rangelands involved and the "state of the art" of the managers and scientists charged with their administration. In the final analysis, implementation of range policy is a site-specific process. These volumes provide the detail necessary for understanding that process.

CHAPTER 2

A BIOLOGICAL DESCRIPTION OF THE AREAS-- THEIR CONDITION AND RESOURCE CONFLICTS

Before embarking on a discussion of the policy of stewardship, it is important to introduce the physical resources of each of the stewardship areas and briefly discuss the resource conflicts that are occurring.

Challis

The Challis stewardship area consists of approximately 756,000 acres in Custer County, located in central Idaho in the Salmon River drainage. It consists primarily of mountains and narrow valleys containing the secondary river drainages. The area is included in two major land resource areas (SCS,1981): Lost River Valleys and Mountains and Northern Rocky Mountains.

Elevation within the area ranges from 5,000 to 11,000 feet with slopes from 0 to 120 percent. Soils are derived from volcanic and sedimentary parent materials and tend to be gravelly with relatively low water holding capacities. Erosion hazards are usually quite high.

Precipitation ranges from a low of seven inches at the town of Challis to 17 inches in the higher ranges. The growing season averages 110 days at Challis but frosts have been recorded in each month. The average annual temperature ranges from 37 to 45 degrees (f).

Vegetation

Four major vegetation types and 18 ecological sites (range sites) predominate the lower elevation BLM lands. The dominant vegetation types are: 1) the Wyoming Big Sage-Bluebunch Wheatgrass-Sandberg Bluegrass type which consists of approximately 120,000 acres; 2) the Mountain Big Sage-Idaho Fescue-Bluebunch Wheatgrass types which consists of about 73,000 acres and 3) the Shadscale-Needle and Thread-Indian Ricegrass-Sand dropseed type which consists of about 32,000 acres and 4) the Threetip Sagebrush-Idaho Fescue-Bluebunch Wheatgrass type which consists of about 23,000 acres. Together these four vegetation types make up about 75 percent of the area covered by the Challis Environmental Impact Statement (BLM, 1978).

High elevation USFS lands are generally in the conifer type. Douglas fir predominates here.

Only about 1,000 acres managed by the BLM are identified as riparian zones or wet meadows.

Range condition estimates on BLM lands were prepared in the mid 1970's. These estimates are based on percent cover by weight (BLM, 1978) Condition estimates on USFS lands are "estimated ...using existing range studies and visual observations (Challis Stewardship Committee, 1985). Trend estimates are based on nested plot frequency, a method that has been adopted by the USFS, BLM and SCS. Unlike the other stewardship areas, inventory and classification of BLM lands in this area are based on range sites as mapping units. Condition and trend data are presented in Tables 1 and 2.

TABLE 1

Estimated Range Condition by Class
On the Challis Stewardship Area

Agency	Excellent	Good	Fair	Poor
BLM	*	40.4	175.0	121.1
USFS	36.1	216.5	72.5	36.1
Total	36.1	256.9	247.2	157.2
% Total	5.2	36.8	35.5	22.5

*The excellent category is not used in BLM analysis

TABLE 2

Estimated Trend on the Challis Stewardship Area
by Percent Class

Trend Class	USFS	BLM
Upward	5	4
Downward	5	22
Static	70	60
Nonrange	14	20

Fish and Wildlife Resources

Among game animals, elk (Cervus canadensis), deer (Odocoileus hemionus and O.virginianus), antelope (Antilocarpa americana), bighorn (Ovis canadensis), and mountain goats(Oreamnos americanus) live within the Challis ESP areas. Sage grouse,(Centrocercus urophasinaus) chukars (Alectoris chukar) and Blue Grouse(Dendragapus obscurus) are the most abundant game birds. The area is also an important spawning and rearing site for numerous salmonids. Rainbow,(Salmo gairdnerii) cutthroat(S. clarrkii), brook (Salvelinus fontinalis) and Dolly Varden (S. malma) trout are all resident and remnant chinook salmon(Oncorhynchus tshawytscha) and steelhead (Salmo gairdnerii gairdnerii) are found in the area. These anadramous species are found in 11 streams, totaling 110 miles within the stewardship area.

Only two threatened or endangered species have been identified in the area. They are the American peregrine falcon (Falco peregrinus) and the bald eagle (Haliaceetus leucocephalus) . There are a total of 291 terrestrial wildlife species present (72 mammals, 204 birds and 15 amphibians and reptiles).

Land Tenure

The BLM and the USFS administer approximately equal areas in the Challis stewardship area, but the USFS lands are split between the Challis National Forest (about 243,000 acres) and the Sawtooth National Recreation Area (about 118,000 acres). State and private lands make up about eight percent of the area (approximately 59,000 acres). Land tenure is displayed in Table 3.

TABLE 3

Challis Stewardship Area Land Tenure

Land Holder	Acres	Percent of Area
Salmon District, BLM	336,511	44
USFS		
Challis Natl. Forest	242,650	33
Sawtooth Natl. Rec. Area	118,240	16
State of Idaho	19,835	3
Private	38,835	4
Total	756,071	100

Feral Horses

The existence and management of feral horses on the Challis Stewardship area has been a central conflict in the management of the lower elevation (BLM) lands. After several years of litigation by the American Horse Protective Association (AHPA) and other groups, the BLM has been allowed to "bring the wild horses under management"(BLM,1985:3). The feral horse herd currently (1985) numbers about 260 adult horses plus their trailing yearlings and foals. The BLM completed roundups in 1979, 1980 and 1983.

BLM's inability to to reduce wild horse numbers concurrent with livestock reductions before 1983 caused considerable problems in attaining the desired management objectives for the six allotments with feral horse populations according to BLM documents.

Land Uses

Twenty-eight livestock operators use 23 allotments on the Challis stewardship area. They harvested 28,400 AUM's of forage in 1984 (Challis Ann. Rpt.,1985). Approximately 10,000 fishing days and 11,000 hunting days were estimated for the same period. Most hunting is for elk and deer.

The Challis area has the fewest estimated dispersed recreation days of the three areas. Camping in established areas is estimated at slightly more than 10,000 RVD's.

Challis leads the three areas in federal revenue generated by mineral leasing with slightly more than $300,000 per year. Mining remains the major economic activity in the area and supports much of the population of the towns of Challis and Clayton. Timber harvest for the area was estimated at 800 thousand board feet (mbf).

Resource Problems

Perhaps more than the other areas, Challis displays classic resource conflicts. The area has experienced increased demands for recreation and wildlife habitat.

The forage resource in particular has been subject to increased demand from feral horses while livestock grazers have been threatened with reductions in order to improve the vegetative resource. The requirements of anadramous and resident fish also seem to conflict with traditional methods of livestock management on meadows and riparian areas.

Interestingly, the resource conflicts in this area seem to be driven by agency attempts to reallocate the uses of the resource as a result of regional and national pressures, not as a result of local demand.

EAST PIONEER

The East Pioneer Stewardship area lies in western Montana, west of a line between the cities of Butte and Dillon. It is comprised primarily of the eastern slope of the East Pioneer mountains and lies within the Northern Rocky Mountain and Northern Rocky Mountain Valleys land resource areas. All but the extreme northern end of the stewardship area lies within the Big Hole River watershed. Elevations range from 5,500 to 9,000 feet.

The soils are complex and highly mineralized and classified as highly to moderately erodable (Mountain Foothills EIS, 1980). Soils are primarily dry gravelly, calcareous, alluvial types with rocky outcrops .

The average annual temperature ranges from 39 to 43 degrees (f). There are from 100 to 120 frost-free days. Precipitation ranges from less than 10 inches in the foothills east of the East Pioneers to more than 40 inches in the higher conifer vegetation type. Most precipitation is snow with rainfall coming mostly in June.

Vegetation

Vegetative productivity potential is average for southwestern Montana (800-1,700 lbs per acre) with present production less than half the potential (East Pioneer Stewardship Committee Report, 1983).

Inventory and classification of rangelands is based on vegetative types. Six types are used to describe the area. They are: grasslands, meadows, sagebrush, mountain shrub, conifer and waste. Typical species included in each type are listed in Table 4.

TABLE 4

EAST PIONEER VEGETATIVE TYPES

TYPE	TYPICAL SPECIES
GRASSLANDS	
WARM	Blue Gramma, Needle and Thread
COOL	Bluebunch Wheatgrass, Idaho Fescue
MEADOWS	Bluegrass, Bromes and Willows
SAGEBRUSH	Big Sagebrush
MOUNTAIN SHRUB	Mountain mahogany, Juniper
CONIFER	Douglas Fir, Lodgepole Pine Idaho Fescue
WASTE	

TABLE 5

Percent Range Condition of Six Vegetative Types
In the East Pioneer Stewardship Area
(BLM Lands)

Vegetative Type	Excellent	Good	Fair	Poor	Unknown
GRASSLANDS	19	49.2	29.4	2.0	.4
MEADOWS	3.3	41.5	43.5	10.9	1.2
SAGEBRUSH	7.4	54.6	35.2	1.6	1.2
MTN. SHRUB	29.7	38.8	15.6	1.7	16.2
CONIFER	3.1	6.3	9.5	3.6	77.5
WASTE	0	1.6	1.9	.1	96.5

Table 5 displays data on range condition estimates. These estimates are for vegetative types, a classification too broad to indicate variations in site potential and are for lands covered in the Mountain Foothills EIS, an area much larger the stewardship area alone. However, they are the only published estimates of range condition.

The condition estimates were completed between 1976 and 1978 and were made by ocular estimate compared to SCS site guides. Estimates of range condition on Forest Service allotments for the stewardship area are not available. Monitoring plots based on frequency (the presence or absence of a species in a plot) have been established along with photo points on several of the stewardship allotments.

Fish and Wildlife Resources

The Big Hole River has been designated as a "blue ribbon trout fishery" by the State of Montana. The river receives heavy pressure from instate and out-of-state fishermen. The stewardship area provides critical winter habitat for approximately 1,500 mule deer and 1,000 elk. Small resident populations of antelope and big horn sheep also exist within the stewardship area. Non-game wildlife species of special concern include 11 mammals, 22 birds and 2 amphibians (Flath, 1979).

Land Tenure

Administration and ownership of the East Pioneer Stewardship Area is displayed in Table 6.

TABLE 6

East Pioneer Land Tenure

Land Holder	Acres	Percent of Area
BLM	150,000	20
USFS	450,000	60
State	75,000	10
Private	75,000	10
Total	750,000	100

Land Uses

Thirty livestock operators lease 20,300 AUM's of forage on the stewardship area each year. Several allotments are split among grazing associations. The BLM allotments in the lower foothills are typically sagebrush-bunchgrass communities that have traditionally been grazed in early spring each year. Allotment management plans including pasture rotations were not implemented until after the 1978 Mountain-Foothills EIS.

Forest Service allotments are typically the high elevation mountain communities that are unavailable for grazing until June. Thus grazing pressure on the BLM sites has traditionally been controlled by the availability of hay on the home ranches and the range readiness date issued by the Forest Service.

Recreational use of the stewardship area is significant. The East Pioneer steering committee estimates 34,000 fishing days and more than 25,000 hunting days (HD) each year. By far the greatest hunting pressure is for elk (18,500 HD). Dispersed recreation is estimated at more than 52,000 recreation visitor days (rvd's) and camping at developed sites totals almost 8,000 rvd's.

The stewardship area also produces approximately 5,000,000 board feet of timber each year (5,000 mbf) and is the site of one municipal watershed.

Resource Problems

Stewardship committee members interviewed identified elk winter range, weed control and riparian zone management as serious resource problems. Minimum stream flows for maintenance of the fishery in the Big Hole River and the associated irrigated hay lands is also an important issue.

Much of the effort in the program has been directed toward solving the livestock-vegetation problems that resulted from an artificial boundary between BLM and USFS lands. Blocking up allotments into more manageable units that include lands from both the USFS and BLM has allowed the implementation of pasture rotations.

The Modoc-Washoe Area

The Modoc-Washoe stewardship area is located in the northeastern corner of California and the northwestern corner of Nevada. The public lands included are portions of the Susanville District of the BLM and the Warner Mountain District of the Modoc National Forest.

The area is included in the Malheur High Plateau major land resource area. The Warner Mountains (10,000 feet) dominate the area and form its western border. The rest of the area is dominated by the closed basin and ranges of Nevada. The west slope of the Warners is the source of the Pit River, a major tributary of the Sacramento River.

Elevations in the area vary from 4,500 to 10,000 feet. Valleys and ranges lie on a north-south axis. The soils vary from alkaline clays in the basins to stony loams in the uplands. Erosion hazards are low in the basins and increase with slope in the mountain valleys.

Precipitation varies from approximately 6 to 28 inches, falling mostly in winter as snow or rain. Occasional summer thunderstorms provide additional moisture. The average annual temperature ranges from 41-50 degrees with from 30-140 frost-free days depending on elevation.

Vegetation

Vegetation in the area has been classified in six broad vegetation types. They are listed along with important species in Table 7.

TABLE 7

Modoc-Washoe Vegetation Types

Type	Important Species
Saltbrush	Sagebrush, Creoste, Saltgrass
Sagebrush	Sagebrush, Bitterbrush, Idaho Fescue, Sandberg Bluegrass
Juniper	Juniper, Sagebrush
Mountain Shrub	Ceanothus, Bitterbrush, Lupine Bluebunch wheatgrass, Idaho Fescue
Meadows	Bluegrass, Willow
Conifer	Ponderosa Pina, Lodgepole Pine, White fir

Estimates of range condition are displayed in Table 8. Condition estimates for BLM lands in the stewardship area were completed between 1974 and 1976 as a part of the Cowhead-Massacre EIS and the Tuledad Homecamp EIS. The estimates are based on percent composition by canopy cover correlated to SCS site guides. However, the unit of analysis was habitat types rather than range sites. Forest Service condition estimates are based on ocular reconnaissance. Existing monitoring plots on the Warner Mountain district are no longer read on a regular basis according to USFS personnel interviewed.

Based on the acreage in Table 10, an estimate of percent of area in each condition class is presented in Table 8. Percentages for USFS lands are based on suitable acres. Percentages for BLM lands are based on total acres.

TABLE 8

Range Condition by Class on the
Modoc-Washoe Stewardship Area
(000 of acres)

Agency	Good	Fair	Poor	Unknown	Unsuitable
BLM	96.4	972.6	110.8	--	--
USFS	17.7	72.6	58.9	19.0	165.9
Private				600.0	--
States				22.0	--
Total Ac.	114.1	1,045.2	169.7	641.0	165.9
% Total	5.3	48.9	8.0	30.0	7.8

As Table 9 indicates, there is a substantial difference in the percent of rangeland in the poor condition class. The fact that the percent of USFS land in poor condition exceeds the percent of BLM land in poor condition is unusual. It is true that different methods have been used to make the estimates, but the fact that the USFS estimate exceeds the BLM estimate by a factor of four would seem to indicate the need for closer examination.

TABLE 9

Range Condition by Agency
on the Modoc-Washoe Stewardship Area

Condition Class	BLM	USFS
Good	8.2	10.5
Fair	82.4	43.1
Poor	9.4	35.0
Unknown	--	11.0

Fish and Wildlife Resources

Four wildlife issues are important on the Modoc-Washoe site according to a state wildlife biologist. They are 1)protection and improvement of riparian habitat; 2) deer populations 3) antelope populations and 4) sage grouse populations. Limited trout fisheries exist in several streams on BLM lands and are extensive in the Warner Mountain district (USFS).

Two threatened or endangered species have been observed in the area; the bald eagle and the peregrine falcon. Neither have been observed nesting in the area. The proposed reintroduction of big horn sheep in the High Rock Canyon area has been related to some of the most controversial decisions made by the steering committee.

Feral Horses

The Modoc-Washoe stewardship area has a wild horse population estimated at 500 animals. The BLM has been particularly active in the management of the horses, using round-ups and breeding management programs to maintain the herd's health. The Bureau maintains an active feral horse adoption center near its district office in Susanville, California.

Land Tenure

The BLM is by far the largest land holder in the Modoc-Washoe stewardship area. The area is unique in that private lands make up the second greatest proportion of land. Land tenure is displayed in Table 10.

The fact that private land owners hold approximately 23 percent of the stewardship area strengthens their position relative to the other agencies and the other chartered stewardship areas. Only about four percent of the Challis ESP is privately held and the comparable figure for East Pioneer is about ten percent.

TABLE 10
Modoc-Washoe Land Tenure

Land Holder	Acres	Percent of Area
BLM	1,426,000	62.0
Private	529,000	23.0
USFS	322,000	14.0
State	23,000	1.0
Total	2,300,000	100.0

Land Uses

Eighty-two operators lease almost 124,000 AUM's of forage from the federal government on the Modoc-Washoe, making this unit, by far, the largest of the three chartered stewardship areas.

The Modoc-Washoe also has the greatest recreational use of the stewardship areas. The ESP draft report (1984) estimates that more than 169,000 fishing days and 102,000 hunting days occurred on the unit in 1983. Most of the hunting days (61,000) were related to chukar although significant deer (27,000) and antelope (10,500) hunts occur here.

Estimates of camping include almost 109,000 RVD's in organized sites and approximately 177,000 RVD's of dispersed recreation (which includes camping at undesignated sites). The Modoc-Washoe is the only stewardship area which includes designated wilderness. The estimated use of the

Warner Wilderness is approximately 42,000 wilderness user days .

The Modoc-Washoe area is also the leading timber producer of the three stewardship sites with slightly more than 15,000 MBF of timber harvested in 1983. The area produces about two-thirds of the mineral revenue of the Challis area (estimated at slightly more than $200,000).

It is also particularly rich in cultural resources, with an estimated 13 archeological sites per section. These sites are particularly well preserved in the drier BLM areas east of the Warner Mountains.

Resource Problems

The Modoc-Washoe stewardship area faces increased demands on resource outputs as a result of growth of populations in nearby northern California and Nevada. Although the area is remote it is the center of a great deal of recreational use. The Modoc-Washoe's demand for recreation is more than twice as great as the combined recreational demand of the other two areas.

The Modoc region has an established history of controversy associated with management of livestock on federal lands. Rowley (1985:198) writes that proposed reductions in cattle numbers on USFS lands in the late 1940's resulted in the "Modoc Grazing Wars."

> Ranchers, merchants and other landowners united against the service, charging that it was denying their right to make a living. Local citizens refused to cooperate in fire fighting and posted no trespassing signs on private lands against service personnel and hunters arriving from the cities. The citizens contended that the Forest Service was ruining the main industry of the county.

While other areas (especially Challis) have more severe conflicts among competing resource uses, competition for resources is largely based on human needs rather than the habitat requirements of animal species.

Among the most important resource conflicts on the Modoc-Washoe are designation of wilderness areas, management of riparian habitat and the reintroduction of big horn sheep. The feral horse herds on the Modoc-Washoe, while significant do not seem to have generated the degree of conflict that they have in Idaho.

Management of riparian areas is probably the most critical biological problem although management of deer winter range is also controversial. The riparian conflict is not surprising considering the very arid nature of the stewardship area particularly in its eastern two-thirds.

Declining sage grouse populations were of particular concern to wildlife managers interviewed in this study. Many of the meadows associated with ephemeral creeks and basins were heavily used by livestock. Agency biologists complained bitterly that permittees were often leaving salt for livestock on the meadows rather providing it away from

water as good management would indicate.

Heavy utilization of riparian areas by cattle was evident throughout the area and grazing systems which alleviate this heavy utilization were an exception rather than the rule, particularly on private lands. Because of the nature of land tenure on the BLM lands, most of these riparian areas and water developments occur on land owned by livestock producers.

Riparian management is also of concern on the higher eleveation USFS lands where resident cold water fish populations are found. While the USFS has developed some model riparian restoration projects, most fish habitat has been degraded according to forest managers. A major complaint of forest managers was a lack of funds to initiate better range management practices.

Despite a large livestock program on the Warner Mountain district, there is no range conservationist position for the USFS in the stewardship area. As a result USFS personnel interviewed, complained of trespass problems and an inability to monitor utilization and readiness dates adequately.

CHAPTER 3

THE FAMILY OF COOPERATIVE MANAGEMENT PROGRAMS

Stewardship embraces a variety of efforts aimed at improving federal rangeland condition through cooperation with permittees, state and local governments and other public land interest groups. This study focuses on the three formally chartered stewardship areas but there are ten other stewardship areas and many other cooperative management programs. This chapter briefly examines the similarities and differences among all of these cooperative efforts.

The Experimental Stewardship Program envisioned by Congress has its roots in the Oregon Range and Related Resources Evaluation project (EVAL) which was established by the Forest Service in 1976. The Senate report on the Public Rangelands Improvement Act states: "The committee was made aware of the successful efforts in cooperative range management which have occurred in Grant County Oregon and was persuaded that this approach ought to be tried on an experimental basis in other areas..." (US Sen.Rpt. 95-1237:12).

Sanderson and Quigley (1986) write that EVAL was originally designed as a research project which would investigate the impact of five levels of management on 18 resources over a ten-year period. Eventually 15 of those resources were dropped from the analysis leaving forage, water and economic resources in the analysis. In order to insure private landowner cooperation, the USFS offered a 75 percent cost-share for improved range management practices on 22 ranches. The area includes 338,000 acres of mixed public and private land. Approximately 1.8 million dollars were invested in the improvements.

Much like stewardship, EVAL included a coordinated effort among the USFS, BLM, Soil Conservation Service (SCS), Oregon State Department of Forestry and Department of Fish and Wildlife, the Agricultural Stabilization and Conservation Service (ASCS) and the Cooperative Extension Service. The U.S. Fish and Wildlife Service (USFWS) and the National Park Service (NPS) have also participated. Data summaries, analyses and a final report on the project are being prepared this year.

The idea of a coordinated effort for managing intermixed private and public rangelands is not new. The Mizpah-Pumpkin Creek Project, the first official coordinated management program, was initiated in eastern Montana in 1928.

Malone and Roeder (1976:243) write:

> In 1928 a group of southeastern Montana ranchers, cooperating with the federal and state governments and the railroads, created America;s first "cooperative grazing district." Forming the Mizpah-Pumpkin Creek Grazing Association, these stockmen joined together in taking a lease on over one hundred thousand acres of Rosebud and Custer county range land, which was owned by both public and private interests. Carefully controlling the number of animals allowed on the range, the graziers soon restored it to full productivity.

In the 1950's, the SCS began promoting coordinated resource management through the Soil Conservation Districts. Lundburg and Wilson (undated) cite the Northeast Elko Soil Conservation District's efforts and a similar "Range Renewal Program" in the Modoc-Washoe area as early examples of coordinated management efforts.

The Stewardship Projects

As a result of Section 12 of PRIA, the Secretaries of the Interior and Agriculture formally established three ("joint") stewardship areas. Two other areas were considered for formal recognition but they never received a charter. Figure 1 illustrates the location of the areas.

Two unchartered (multiple allotment) projects were undertaken in Utah (Randolph) and Nevada (Tonopah) by the BLM without formal participation by the USFS. Eleven other "individual stewardship projects" were established by the

BLM in Oregon, Arizona and New Mexico. Since their establishment in 1980-81, three of these 11 areas have been deleted from the program. Table 11 presents a list of the various stewardship projects.

TABLE 11

EXPERIMENTAL STEWARDSHIP AREAS

Type	Name	Thousand of Acres
Joint	Challis, ID.	375
	Modoc-Washoe CA.	2,300
	East Pioneer,MT.	750
Multiple Allotment		
	Randolph, UT.	569
	Tonopah, NV.	4,100
Individual	*County Line-Gila,AZ	38
	Crozier, AZ.	114
	Lazy B, Az-NM	186
	Berryman, NM	12
	*Dufers Pt.,NM	30
	*Twin Butte,NM	5
	White Sands,NM	43
	Y Ranch, NM	91
	Alkali, OR	65
	Beulah, OR	49
	Colton, OR	3

*These allotments have been deleted from the program
Source: ESP Review Draft

Cooperative Management Agreements

In 1983, BLM Director Robert Burford (BLM,1983) directed the Bureau to pursue "Cooperative Management Agreements"(CMA's) with livestock operators on BLM lands. Burford wrote:

> The purpose of Cooperative Management Agreements is to provide livestock operators (or associations) who have demonstrated good rangeland management practices with: 1) recognition of good stewardship; 2) a larger role in managing grazing on the public lands; and 3) the assurance of tenure needed to encourage private investment in rangeland improvements. By doing so, the BLM will be encouraging operators to maintain or initiate good grazing management practices, while also reducing Federal expenditures for improving and managing the public lands.

The CMA's were to be written agreements between the BLM and the operator with stated objectives for the management of the allotment. The objectives could include improvement of wildlife habitat and watershed conditions or any other objectives agreed upon by the parties. The agreements were to last 10 years and would be reviewed in the fifth year. If satisfactory progress was made toward the objectives in the five year period, the agreement was to be extended for another five years.

The CMA program offered the livestock operator a great deal of flexibility. Instead of the BLM dictating on and off dates and the number and kind of livestock to be grazed on the public lands, the rancher could make those

decisions. If the operator could increase his numbers and season and still show that he was meeting the specifications of the agreement, he would be in compliance.

BLM managers interviewed in this study suggested that Washington-level administrators envisioned the CMA's as a high profile program that would give good livestock operators recognition and in theory, use peer group pressure to encourage other operators to do a better job of managing their allotments. Agency administrators hoped that increased income from federal allotments, peer recognition and a sense of greater management control would encourage conservation of public rangelands.

The theory is viable, but as has often been the case, political agendas influenced the implementation of the program and eventually led to its downfall.

Without adequate public notice and comment periods (established by the Administrative Procedure Act) the BLM signed six CMA's during fiscal year 1984. This attempt to implement the program without consultation and comment from affected interest groups raised the ire of the Natural Resources Defense Council, the National Wildlife Federation (NWF) and other environmental organizations.

Five groups and one individual sued William Clark, the Interior Secretary in May, 1984 in the eastern district of California. The suit (Civ. S. -84-616 RAR) alleged that

the Secretary had: 1) abdicated his duty to protect the public lands by allowing ranchers with CMA's to set their own stocking levels and seasons of use; 2) shut out the non-ranching public from the decision making process required in FLPMA; 3) "eviscerated" the land use planning process contemplated by FLPMA and PRIA and 4) failed to meet procedural requirements mandated by the APA.

The Federal District Court for Eastern California, relying heavily on the work of Coggins, ruled in favor of the plaintiffs and prohibited the Secretary from implementing CMA's and several other proposed changes in the Code of Federal Regulations related to the administration of grazing.

The arguments used by the Justice Department attorneys representing Interior are of particular interest to this study. The government had argued that statutory authority for the CMA program existed in section 12 of PRIA, which established the Experimental Stewardship Program.

The court expressly ruled that authority for CMA's did not exist in section 12 or anywhere else in PRIA. In addition, the court noted that the CMA program does not meet the description of the projects that stewardship programs were intended to encourage. Further, the court ruled that the CMA program was intended to be permanent and was not experimental.

The government's attorneys had argued (based on a statement by Coggins) that the Secretary's ability to experiment under ESP "is bounded only by imagination."

The court wrote:

> Putting aside for present the lack of precedential value in a law review article, Professor Coggins was surely not to be understood to be opining that the Secretary's ability to experiment was not also bounded by existing law. At any rate, it is the ruling of the Court that any experimentation with new permit issuance procedure is bounded by existing law, as well as by the Secretary's imagination, and the ESP does not create an exception to the FLPMA permit requirements.

Stewardship steering committee members in all three states commented on the problem of associating the CMA program with the Stewardship program. Four of the six ranking BLM managers involved in the program cited concerns over keeping the stewardship program separate from CMA's (before the court's ruling in early September).

One manager suggested that pressure to implement the CMA program in conjunction with the Stewardship program was coming directly from the Director's office.

Following the court's decision, Interior decided not to appeal the ruling. The Cooperative Management Agreement Program is apparently dead, but it deserves at least a short post mortem.

The CMA program could have been a valuable addition to the BLM's array of management techniques. The agency is badly in need of a strategy that uses recognition of outstanding operators in order to create a sense of peer-group pressure. Further, strengthening the tenure of permittees with the federal landlord is consistent with economic theory for improving the conservation ethic of permitees.

The Izaak Walton League (IWL), which was not a party to the suit, voiced cautious support for the CMA concept given additional limitations such as objective criteria for awarding CMA's, a limited number of CMA's awarded each year and then only to allotments with completed allotment management plans. The IWL also suggested selection in consultation with state wildlife agencies, a fixed period of operation and a thorough monitoring program (Sharpe, 1983).

An annual review and concurrence of the permittees plans for stocking levels and seasons of use would have defused the most serious objections to the plan. These modifications coupled with active participation and review of local interest groups would have allowed BLM an incentive to reward outstanding operators. Incentives, in the final analysis, will be critical to stimulating better stewardship of public lands by livestock operators.

Coordinated Resource Management Planning

Coordinated resource management planning (CRMP) is a very close relative of experimental stewardship. The CRMP program in Nevada provides a good example. Federal and state resource management and agricultural agencies in Nevada signed a memorandum of understanding that commits them to:

> Developing and applying coordinated resource management and planning concepts on operating units, allotments, watershed and other appropriate resource areas which may be made up of interdependent private, federal state and local government administered lands.

Two organizations were created by the agreement; a group of senior agency officials and a task group of technical representatives who are high level staff officers.

Lundburg and Wilson (undated) suggest that the CRMP process removes the state BLM director from the hub of controversy. Often state directors are asked to overturn local agency decisions, but because of state level coordination and local decision making, interest groups in CRMP areas must talk to each other and settle differences through direct confrontation and mutual accommodation rather than relying on appeals to higher level officials.

But local CRMP groups can not override the decison-making authority of those responsible for public and private resources. For the CRMP process to work, the plans must fit within the decision authority which guides the responsible resource manager.

The role of the agency manager in CRMP is similar to his or her counterpart in the chartered stewardship areas. In the three stewardship areas studied, decision-making occurs through a stated policy of consensus. Thus the district manager or forest supervisor shares veto power with all of the members on the steering committee. In CRMP, the consensus process is de facto, rather than de jure. The CRMP committee must develop a proposal that is acceptable to the district manager.

Because of the charter granted to the three stewardship areas, management plans may, in some cases, deviate from the letter of the law. The CRMP areas lack this experimental authority, although in reality, district managers are probably granted a good deal of flexibility by state directors.

There is some disagreement among agency officials about how the CRMP planning process works. One field level resource manager who participated in the process suggested that in CRMP, the agency developed a plan and then offered it for public comment. The agency was, in this interpretation, the hub of a wheel; initiating plans and modifying them

based on input from the CRMP members.

When questioned about this, a state BLM director suggested that this was not the case. Plans, he said, were derived by the group, not at the suggestion of area staff. The discrepancy remains unresolved but it serves to indicate that different levels of the organization have different points of view on this matter.

A BLM range conservationist in another state also commented on the importance of this difference. He suggested that ESP works well because the permittee initiates the allotment management plan (AMP). "I don't manage those allotments, the permittee does. We administer them, and that is an important difference. If the permittee initiates his own plan and we implement it with some modifications, he is much more likely to stick with it and do a good job."

CHAPTER 4

HOW STEWARDSHIP COMMITTEES OPERATE

There are three essential elements in the operation of the stewardship committees: 1) participation of all affected interest groups, 2) the use of consensus in decision-making and 3) the use of technical groups making recommendations about site-specific problems.

Participation and Representation

The Senate report which initially outlined the stewardship program (U.S. Sen. 95-1237:12) directs the use of a steering committee comprised of:

> the appropriate locally based Federal officials, such as the national forest supervisor, the BLM's district manager, and the district conservationist of the Soil Conservation Service, the appropriate representatives of the State government's institutions and agencies which have an interest in the lands and resources of the area (such as the Land and Water Resources and Fish and Wildlife Departments), range and other resource specialists from the State's land grant university, and a balance of range users, including local livestock producers, landowners, and others as appropriate.

Each of the stewardship areas has established a steering committee which controls the program's operation. Membership varies from 13 to 22 individuals.

Representation of all affected interest groups is a critical element in the program's operation.

Sharpe (1984:25) comments on this issue:

> The advantages of cooperative management derive directly from its success as a political process--its ability to yield decisions that are politically acceptable to all interests-- decisions that will not be blocked by appeals to Congress and the courts.
>
> But if political sensitivity is the great strength of the concept, it is also its weakness; cooperative management must succeed politically if it is to succeed at all. For cooperative management to be an effective political process, all of the interests with a major stake in the outcome must view it as legitimate and fair--as a value-neutral means of accomplishing shared ends of multiple use range management. If they do not--if any set of interests see cooperative management as a part of a hidden agenda to favor competing values--then it will simply become another battle ground.
>
> It is in terms of this fundamental requirement of perceived legitimacy that I believe cooperative management faces its greatest difficulties. Last week (April, 1984) I polled most of the national conservation groups that are involved in range management issues with regard to their attitudes and policies on cooperative management. Those discussions revealed a pervasive climate of anxiety, distrust and opposition.

Participation by environmental interest groups is one of the most important issues associated with stewardship and local decision-making. Representation of environmental groups has been strongest at the Modoc-Washoe area. Challis and East Pioneer have, thus far, failed to attract representatives of these national environmental groups. In the Challis area, representatives of wild horse interests have refused to participate.

The Challis group has had strong participation from a representative of the Idaho Conservation League (ICL) for the last two years but national environmental groups such as the Sierra Club, National Wildlife Federation and National Audubon Society do not have a local representative on the committee.

In the East Pioneer area, private citizen conservation groups are represented by two unaffiliated local sportsmen's organizations.

There is no question that lack of participation by local representatives of national conservation groups threatens to undermine the legitimacy of the stewardship process in these two areas.

Table 12 displays participation by interest groups. Land agencies include organizations that are directly responsible for managing public lands. These agencies include the BLM, the USFS, and state land departments. In Montana, the Department of Fish, Wildlife and Parks is responsible for the management of a large land unit at the north end of the stewardship area. Similarly, on the Modoc-Washoe the U.S. Fish and Wildlife Service is responsible for the management of the Charles Sheldon National Antelope Refuge which is adjacent to the stewardship area, but not directly affected by the management decisions of the committee. In both cases these agencies are clearly mandated to manage for wildlife values

and do not share the multiple use responsibilities of the USFS and BLM.

TABLE 12

Stewardship Committee Memebership
By Interest Group

AREA	#MEMBERS	INTEREST GROUP					
		LAND MNGMNT	WLDLF MNGMNT	USDA	LVSTCK	CONSERV GROUP	OTHER
MODOC-WASHOE (Ca.-Nv.)	22	2	3	6	7	3	1
CHALLIS (Id.)	20	4	1	5	7	3	1
EAST PIONEER (Mt.)	13	2	1	3	4	2	1

The Challis stewardship area is faced with a unique problem in the form of the Sawtooth National Recreation Area (SNRA). The SNRA makes up approximately 16 percent or about 118,000 acres of the Challis stewardship area. The area, as its name implies, is managed for recreation as a dominant use by the USFS.

By far, the largest group is the one classified as "USDA." THe USDA group includes the Soil Conservation Service, the Agricultural Stabilization and Conservation

Service (ASCS) and state and local representatives of the Extension Service. The USFS is also a USDA agency, but its mission is fundamentally different from the missions of these groups.

The USDA group offers advice or financial cost sharing to the commodity producers involved in stewardship. These services may include cost-sharing for soil and water conservation practices, price supports and emergency relief for forage crops and cattle or advice on better livestock production methods. The Cooperative Extension Service has also been involved in some states in challenging suggested management practices of the land management agencies.

The livestock group is composed of livestock producers and their associated interest groups. From a purely numerical standpoint, each of the stewardship areas are dominated by this interest group. Representatives on the steering committees are usually members of permitees associations, county producer organizations, local governments or Resource Conservation Districts (RCD's). In the case of the last two groups, representatives theoretically represent broader interests than livestock production, but because these representatives are cattlemen as well as county commissioners or RCD representatives their interests are generally coincident with the livestock group.

Other organizations involved in the stewardship groups include representatives of the state executive

department, usually from the state department of agriculture.

The Representative and the Organization

Ideally, representatives to the steering committee must be able to represent the policy-makers of their organizations. It is common to find the highest ranking local official of an organization on the steering committee. Forest Supervisors and BLM District Managers are commonly found in this group as are regional managers from state wildlife agencies.

There is good reason for this. A member of the steering committee must be able to speak for his or her organization and make decisions that will not be overruled later. Inability to make policy decisions cripples the credibility of the individual within the committee.

Several of the managers interviewed in this study stressed this point. One state game and fish manager recalled that assigning stewardship steering committee representation to a local game warden was a cause of early problems. It was only when he assumed personal responsibility for participation, that the agency was able to clearly state its positions and make effective compromises in land use planning.

Each decision reached by the stewardship committee, in fact, represents a myriad of agreements. There is agreement among the committee members and there are many agreements among each representative and the constituency that he or she represents. As a result, decision-making with this system tends to be time-intensive.

Negotiating authority creates particular problems for environmental organizations which as a rule do not have structures amenable to delegation of authority at the local level.

Both the Challis and Modoc-Washoe stewardship areas have experienced some difficulty attracting environmental group representatives who are policy makers within their respective organizations. In Modoc-Washoe, representatives of environmental interests are drawn from local chapters of the National Audubon Society and the Sierra Club. In Challis, the sole environmental representative is a local member of the Idaho Conservation League who participates in the stewardship process.

In both cases these individuals are representing not only members and officers who live many hours from the sites, but a broad national constituency. Communications among the representatives and their groups is often poor and they do not have authority to make binding policy decisions for their organizations.

This problem is indicative of a broader, organizational problem faced by the environmental groups in particular, but also by the livestock associations. The environmental groups have tended to concentrate their resources at the national level. While local chapters are often active they have engaged in legal action less frequency than their parent organizations.

The Natural Resources Defense Council, The Sierra Club, The National Audubon Society and The National Wildlife Federation have been very successful in carrying out a strategy of litigation and negotiation that has relyed upon staffs located in Washington, D.C. and in regional centers such as San Francisco, Denver and other major western cities. Generally however, these groups do not have organizational structures that allow them to place policy makers on stewardship steering committees. The National Audubon Society, for example, has over 110,000 members in 13 western states, but its staff for the same area totals 12 individuals (Turner, 1984).

This situation almost precludes intensive and effective participation by professional staff members at places like Cedarville, California; Challis, Idaho and Divide, Montana. It is ironic that the stewardship process and new emphasis on local decision making is the ultimate result of the environmental groups suing to require local environmental impact statements.

Continued localization of decision making on public lands may eventually require environmental groups to change their structures and emphases so that they may become more effective at the local level.

The Consensus Process

All three of the steering committees make decisions by consensus and all arrived at the process independently. One California stockman recalled: "When we first started out, we were pretty busy counting votes and trying to figure out who our friends were." But the consensus process eliminates coalition politics. It also puts a great deal of pressure on individuals who veto a near-consensus.

The consensus process protects the federal land managers who are ultimately responsible for carrying out the law, from criticisms of abdication of their responsibility. The issue of abdication revolves around statutory requirements that the Secretaries set appropriate numbers of livestock and seasons of use for the public rangelands. In a closely related case (NRDC et al v. Hodel), the federal courts held that allowing stockmen to set their own management programs under agency supervision "violate(s) the spirit and letter of federal laws which are intended to preserve and improve the ravaged commons through intensive management ..." (U.S. Dist. Court for Eastern California No.

CIV.S-84-616 RAR:4).

Because the Forest Supervisor and the District Manager are members of the steering committees, it is incumbent upon them to insure that recommendations made by the committees are congruent with statutory limitations. One retired District manager, active in the early establishment of a stewardship area, was critical of the program because of the abdication issue. He suggested that the entire stewardship process was simply a method of avoiding cuts in livestock numbers that were called for in the environmental impact statements and that the stewardship process undermined the necessary authority of the local manager to do what needed to be done, despite local opposition.

Agency personnel were generally more reluctant to endorse the consensus process than were livestock producers. A state wildlife agency manager cautioned that "consensus management doesn't always lead to the best decisions." But an area range conservationist disagreed.
"For the first time in years everyone (the SCS, the state game department, the BLM, the USFS and the ranchers) felt like they were all on an equal footing to begin with."

Technical Groups

All three steering committees depend on technical groups or subcommittees to examine the allotments in

question and make recommendations for their management. The technical groups are composed of the permitee, professional resource managers and representatives of environmental interests. These groups, known as technical review teams or technical action groups, examine the site involved and develop recommendations for the steering committee. These technical groups also rely on consensus in formulating their recommendations for the steering committees.

It is important to note that the principals develop the proposal from scratch. Hence ranchers and environmentalists are not in their familiar role of reacting to agency proposals.

An area range conservationist commented: "When you go to someone with a plan and ask them to comment on it, its too late. They (all of the interested parties) should be involved from the start."

This approach has had some notable successes. Several ranchers reported that in the Modoc-Washoe area, the BLM's initial AMP's sometimes called for pasture rotations that required placing livestock on allotments that were still covered by snow. The involvement of the livestock operator and representatives of other interest groups allows most serious concerns to be surfaced early in the planning process instead of later becoming issues at public hearings.

CHAPTER 5

THE POLICY OF STEWARDSHIP

The policy of experimental stewardship is an attempt to find a compromise between an old policy of "home rule on the range" and a new policy of judicial supervision of public land management that emerged in the early 1970's.

Home Rule on the Range

Local control of grazing administration was a hallmark of public range management policies from the 1930's until the late 1960's. This is particularly true on the public domain lands and perhaps less so on the national forests (although the national grasslands represent an exception for the USDA).

Substantive local control was used to secure political support from stockmen for the Taylor Grazing Act. Foss (1960:198) documented the effect of local control on the Grazing Service and the BLM in the grazing districts of eastern Oregon. Describing the local decision-making process, Foss wrote:

"The major policy objectives followed by the decision-makers of the federal grazing subsystem fall into two major categories: 1) the maintenance of the status quo on the federal range and 2) the maintenance of a minimum

rate grazing fee."

In the 25 years since Foss's work, the status quo has certainly changed, but in the eyes of many environmental groups much remains to be done. Increasing demand for amenity values has led to new interest groups and new demands on the administering agencies. Through legislation and the courts, environmental groups have succeeded in establishing a broader multiple use agenda. The perceived status quo is not acceptable to them and the processes that tend to uphold the status quo (programs that emphasize local decision-making) are suspect.

Judicial Policy Making: A New Model

With the signing of the National Environmental Policy Act in January, 1970, a new policy for public lands evolved--management by court order. Lowi (1979) and others trace the development of the activist judiciary to congressional laxity in delegation of authority. Although Coggins (1981) disputes this in recent instances, there is no question that legislative direction has become less specific since the passage of the Interstate Commerce Act in 1887.

Stewart (1975) writes that the extension of bureaucratic authority has outstripped the capacity of Congress and the President to control it. He suggests that there are clear failures of specific agencies which

justify selective judicial intervention in discretionary agency policy choices. Stewart suggests it would be preferable for judges to explicitly set aside policy choices as unsound rather than resorting to indirect, costly procedural strategies.

Atcherman (1980) writes that there are inherent problems with the development of policy in the courts. Legal attitudes toward problem solving support the supposition that if correct procedures are followed, correct decisions will be made. In NRDC v. Morton, the NRDC perceived that overgrazing was the problem, but the result of their case was not the end of the perceived overgrazing but more impact statements and delayed implementation of needed management reforms. Atcherman writes that this is typical because courts tend to choose procedural solutions rather than attacking specific on-the-ground problems.

Coggins traces the activism of the courts in natural resources policy to three causes: 1) the growth of public interest law firms, 2) harder (that is, more explicit) statutory laws which invite lawsuits, and 3) more aggressive review of administrative actions by eastern federal district courts. (Hence the McClure amendment which now requires suits concerning public rangeland management to be filed in the jurisdiction were the alleged mismanagement occurs).

The BLM had decided to prepare "programmatic" environmental impact statements (EISs) for its grazing, timber and coal programs in 1971. The programmatic approach examines an entire program from a national perspective focusing on broad, national policy questions.

In response to the preliminary draft EIS, the Natural Resources Defense Council made it clear to the Bureau that it would not accept a programmatic EIS as sufficient compliance with the National Environmental Policy Act because it did not consider local impacts of grazing management or, more plainly, what the NRDC regarded as overgrazing caused by lack of proper livestock management. When the BLM rejected the NRDC's request for the preparation of individual EIS's, the NRDC filed suit against Interior Secretary Morton in October, 1973, in the Federal District Court in Washington, D.C.

Nelson (1980:46) writes that the NRDC suit posed a challenge to ranchers and an opportunity for the BLM. The suit could open the way for the BLM to make progress toward its long-standing objective of greater public control over the management of the public range. "In short, although NRDC on the surface was an opponent, its objective to force greater consideration of other uses in actuality was good news for the BLM."

Issuing his opinion in late December, 1974, Judge Flannery acknowledged that carrying out his decision would require major new resources, but the fact that BLM's management responsibilities exceeded its resources was not sufficient reason to disregard the NEPA requirements. Shortfalls in agency performance would become a matter for consideration of the Congress.

The Justice Department and the Secretary of the Interior accepted the court order and did not appeal. The decision gave the agency leverage for requesting additional funding for the required EISs. It was difficult for Interior budget officials and the Office of Management and Budget (OMB) to deny the Bureau additional resource because the program was court-mandated.

In the NRDC case Judge Flannery made fundamental budget decisions. His ruling forced the agency into a settlement that will cost the United States $300 to $500 million according to Nelson (1982), who suggests that the cost of the preparation of the EISs exceeds the present value of all the livestock grazing permits on BLM land.

Nelson also writes that the negotiations between BLM, the NRDC and the court resembled a form of staff interchange. In this case, an interest group (NRDC) acted as the staff for the federal judge in preparing the technical materials to facilitate judicial review.

The NEPA requirement did not change policy formulation so much as it shifted the arena from the legislature to the courts. In many ways Judge Flannery's activist role in natural resources management is similar to federal court intervention in busing programs or legislative redistricting.

There is a strategic aspect to judicial natural resources policy that results from NEPA. Fairfax (1978:747) and others have suggested that attempting to change policy through a suit based on NEPA does not achieve its goals.

> The tragedy of NEPA is that it turned energy, attention and effort away from a redefinition of agency authorities and spent it on proliferating paper...Environmentalists tried to find substantive requirements in the process of writing and circulating impact statements, while turning their backs on agencies' authorizing legislation which clearly have substantive content."

A suit under the Administrative Procedures Act or the Taylor Act might have been more effective. The result would have been a change in management. There are costs related to this strategy; it might have required numerous suits and the more conservative western venues might not have looked with favor on NRDC's arguments.

But directly challenging the substance of the agency's alleged mismanagement would have resulted in a court-mandated change in the way the BLM manages livestock grazing rather than a series of 144 documents which have not directly answered environmentalists' concerns about multiple

use policies.

One might argue that the turmoil resulting from the suit brought the issues associated with public rangelands to the attention of the Congress which in turn created new legislation. But a direct challenge of appropriate management might be a more appropriate solution for the litigating environmental groups.

The Policy of Stewardship

The stewardship program created in Section 12 of PRIA represents a new policy. It is an attempt to compromise between "home rule on the range" and judicial natural resource management. In this regard it is an incremental change. The primary difference between stewardship and "home rule on the range" is the use of local decision-making with representation and participation **by all affected interest groups.**

In addition to broader participation, the stewardship policy envisioned by Congress has three elements: 1) offering "incentives to or rewards for" permittees whose good management results in improved range conditions, 2) reducing conflicts among rangeland user groups and 3) improving range conditions.

Representation and Participation

Representation and participation by all user groups is critical to the success of these three elements. It is also one of the major concerns of the environmental groups.

One representative of an environmental group in the stewardship program comments:

> Local public land interests are not always going to be able to take off from their jobs to make mid-week meetings in the middle of nowhere...The public land owner from Ohio or New York is effectively denied participation in on-the-ground teams and is dependent on the national land use planning process to represent his or her views.

Indeed, local planning and decision-making reflects local concerns. An interested party in a distant location must depend upon an organization for representation.

Another concern of environmental group representatives was "capture" of public land administrators by livestock interests.

> Truman (1940:14) writes: Where considerable authority is devolved upon field officials there is always the danger that policy will be unduly influenced by those private individuals and groups who are in closer and more intimate contact with the field than are the superior officers...Localized influence, if carried to any great lengths is likely to beget such differences of policy between field offices that national policy will be a fiction. (quoted in Kaufman, 1960:75).

The capture thesis is one of the major themes of Kaufman's work in analyzing decision-making in the Forest Service. The BLM has grown up with decentralized decision-making, but the USFS is notable for enforcing national and regional consistency among its administrators. The difference between the two agencies is noticeable at the field level.

A supervisory range conservationist for the USFS commented that one of the greatest problems involved in ESP was resistance to the program from "old-timers who think we are giving away the things they worked a lifetime to establish."

Kaufman (1960) suggests that the USFS has undertaken a number of steps to prevent district officials from falling under the influence of local populations. These steps include professional homogeneity, frequent transfer (a common complaint among the commodity interests interviewed in this study), prescribed decision-making through the "Use Book" and close budgetary and administrative supervision by forest supervisors and regional offices.

Local decision-making has long been the preferred policy of the BLM. Former director Frank Gregg (1978) comments:

> We will strive to insure that the majority of resource use decisions are delegated to the local level in the fundamental belief that locally made and locally accountable decisions are in the majority of cases, the best, most sensitive, and most expeditious way to manage the resources of the public lands.

Culhane (1981:228) documented the changes in capture of local resource administrators that resulted from the growth of environmentalist influence:

> The environmental movement of the 1970s constituted a powerful tool that the service and bureau used to reinforce the resource-protection half of the multiple-use policy. Environmentalists' criticisms of past land management mistakes and warning of possible adverse environmental effects of contemplated agency projects were visible public pressures that agency officers could use to justify increasingly stringent restrictions on consumptive users' activities. The militant preservationist demands of many environmentalists added punch to such pressures because the demands confronted traditional users with a choice between complying with the agencies' restrictions or defending themselves against efforts to place more and more federal land off-limits to the "despoilers." **Administrators conciously manipulated this environmentalist threat to obtain user compliance with the restrictions the agencies wished to impose**" [emphasis added].

Thus Culhane suggests that the major problems outlined by Foss and Kaufman in the capture-conformity debate have been largely cured when environmentalists participate as a balancing force in local decision making. This balance was noticeable in the stewardship areas particularly where there was strong participation from the environmental community. But strong participation was not evident in all of the stewardship areas selected for this

study and several interviewees noted that environmental representatives were particularly lacking on some of the unchartered stewardship areas.

The problem is not that environmentalists do not exist in these areas. Rather it is a matter of finding representatives that are in a position to represent the interests and policies of the national environmental groups which are most likely to contest the stewardship process. In order to garner the support of national environmental groups, the stewardship programs must have environmental representatives that are well regarded by regional and national conservation leaders.

In many cases, representatives of the interest groups deny that administrators are making balanced use decisions. Culhane suggests that this is because commodity interests are comparing today to the "good old days" and that environmentalists have not had long enough experience to compare the present with decisions made before their influence developed.

But the representation and participation issue that is central to successful implementation of the stewardship policy remains at issue. Recall that two of the three chartered stewardship areas have no representatives from national conservation groups. Without representatives from these organizations, the concerned citizen in another

location may be denied effective participation.

Incentives to Good Stewards

One of the major elements of the authorizing language is a directive that the secretaries establish "a program which provides incentives to, or rewards for, holders of grazing permits and leases whose stewardship results in an improvement of the range condition of lands under permit or lease."

This language would seem to indicate that rewards and incentives should be made available to individuals who have accomplished improvements in range condition through their good management. But this is not the way the program has operated in the three chartered areas.

Incentives, such as actual use billing and grazing fee credits are available to all permittees with signed allotment management plans (AMPs) within the stewardship areas. Thus the committees and the agencies have avoided the difficult chore of identifying good stewards (peer leaders)and rewarding them. While this seems practical in light of the close-knit nature of rural communities, it certainly is a contortion of congressional intent.

In effect, the agencies have used the stewardship incentives as inducements for signing AMPs. Once implemented, the AMPs will most likely improve range condition. Over time, the effect may be much the same. But

the current approach does not use peer group pressure to induce poor range managers to become good range managers.

Reducing Conflict Among User Groups

Without doubt, the greatest success of the stewardship program falls in this category. All but two of the individuals interviewed (68 of 70) indicated that conflicts among user groups had been lessened as a result of the stewardship program. Many stated that by no means did representatives of the environmental community, the agencies and livestock producers always agree with each other but the level of communication among these groups had certainly improved.

One stockman commented: "It shouldn't take an act of Congress to make two men sit down and talk with each other. But that's how bad things had gotten between us."

Perhaps the best evidence of reduced conflict is the change in the number of appeals of grazing decisions as a result of the stewardship process. The Modoc-Washoe area provides a case in point.

The BLM portion of the Modoc-Washoe stewardship area was covered by two EISs, the Cowhead-Massacre and the Tuledad-Homecamp. Grazing decisions on the Tuledad-Homecamp area were issued prior to formation of the stewardship program in 1979 (see Table 12). Twenty-nine final decisions were issued, 13 were formally appealed.(BLM Range Program

Summary Update,1981).

Grazing decisions on the adjacent Cowhead-Massacre area were issued to 30 permittees in 12 allotments in 1983, following implementation of the stewardship program. Only one of these decisions was appealed. However, the disagreement was not over the substance of the decision, but over the proportion of the cut between the two permittees sharing the allotment. (BLM, RPSU-83). Table 13 details the post-ESP decisions.

Similar success occurred on the Challis Stewardship area where the BLM issued 38 grazing decisions in late 1979 and early 1980. Fourteen of the decisions were appealed and 12 of these were settled through the stewardship committee. The remaining two claims were heard by an administrative law judge and were decided in favor of the BLM (Challis RPSU,1985).

While it is impossible to show a cause and effect relationship, the reduction in appeals is coincident with the use of the stewardship process.

TABLE 13

DECISIONS ON AMP ALLOTMENTS
TULEDAD HOMECAMP PLANNING AREA[1]

ALLOTMENT	#USERS	#APPEALS FILED (PRE-ESP)	STATUS -1982 (POST-ESP)
Home Camp	4	4	Appeal Dropped Decision Implemented
Tuledad	5	3	Appeal Dropped 11-80
Denio	1	1	Appeal Dropped Decision Implemented
Bare	1	1	Appeal Dropped Decision Implemented
Selic-Alaska	2	1	Appeal Dropped Decision Implemented
Lower Lake	1	1	Appeal Dropped Decision Implemented
Duck Lake	1	1	Appeal Dropped (1983) Decision Implemented
Wall Canyon	2	0	Existing AMP
Bicondoa	1	1	Appeal Upheld

1 Source: Tuledad Homecamp Range Program Summary Update BLM

TABLE 14

DECISIONS ON ALLOTMENTS[1]
COWHEAD MASSACRE PLANNING AREA

ALLOTMENT	#USERS	APPEALS FILED	COMMENT
Wall Canyon	3	none	AMP-1982
Long Valley	4	none	AMP-1983
Bitner	1	none	AMP-1983
Nut Mtn.	1	none	AMP-1983
Boggs	2	none	AMP-1982
Mosquito Valley	1	none	AMP-1983
Calcutta	1	none	AMP-1982
Nevada Cowhead	1	none	AMP-1982
N. Larkspur	1	none	AMP-1983
Crooks Lake	1	none	Existing AMP
Massacre Lakes	2	none	Existing AMP
East	4	none	
Sand Creek	10	none	
Sagehen	1	none	AMP-1983
Board Corral	2	none	
Horse Lake	2	none	
S. Larkspur	1	none	AMP-1983
Little Basin	1	none	AMP-1983
Massacre Mtn.	2	yes	

1 Source: Range Program Summary Update, BLM

Improving Range Condition

As its name implies, the central focus of PRIA was the improvement of public rangelands which Congress found to be in "unsatisfactory condition." The policy of stewardship was just one of several policies designed to improve range condition. The primary element of the law was a funding authorization of 15 million dollars per year between 1980 and 1999. Alas, the funds were appropriated only in 1981 and the coalition of environmental and livestock interests brought together by this example of distributive politics eventually collapsed.

In PRIA, Congress defines range "condition" as:

> The quality of the land reflected in its ability in specific vegetative areas to support various levels of productivity in accordance with range management objectives and the land use planning process, and relates to soil quality, forage values (whether seasonal or year round), wildlife habitat, watershed and plant communities, the present state of vegetation of a range site in relation to the potential for that community for that site, and the relative degree to which the kinds, proportions and amounts of vegetation in a plant community resemble that of the desired community for that site.

The definition is broad and specifically includes multiple uses of rangelands and elements of both ecological status and resource value ratings.

It is the question of how to measure range improvement resulting from experimental stewardship that lies at the heart of that delicate intertwining of "science" and "policy." Here policy-makers have suggested a broad definition of range condition and the biologists have taken the ball and run directly to the sidelines with it.

Policy-makers need an information system which can be used to evaluate the success of the resource managers in reaching the management objectives. But that system does not exist. Currently the agencies use an arcane system that measures the degree to which a rangeland unit resembles its theoretical vegetative climax. The climax approach has been criticized by both range scientists Smith (1979), Hacker (1973) and others and policy analysts notably the GAO (1982) and Schiff (1966) because it fails to address management objectives.

The range condition controversy is an excellent example of conflicts that often arise between "science" and "policy." The paradigm of range condition based on ecological status has been challenged and just as Kuhn (1970) has suggested the world of scientists dealing with rangeland vegetation has been severly disrupted. It is doubly difficult for those who would guide rangeland policy to find a method of measuring management objectives while the scientific community remains deeply divided on the issue.

In the absence of experimental data, one is forced to rely on the opinions of the participants. Here, the difference of opinion is largely coincident with interest group membership. Only one of the 26 ranchers interviewed did not believe that range condition had improved as a result of the program. But members of the environmental community, multiple use agencies and USDA agencies were much less certain. Their collective response can best be summarized as "it is difficult to say." All 33 of the multiple use land management agency employees and other USDA employees believed that range condition on the stewardship areas was generally improving, although they were quick to point out the lack of data to support their opinions. The eight individuals representing environmental organizations or wildlife management agencies were generally uncertain whether or not range condition had improved and were quick to point out that improved conditions for wildlife were not necessarily coincident with improved conditions for livestock.

Until the agencies and the stewardship committees agree upon a system of standards for evaluation of the diverse resources included in the Congressional definition of range condition, it will be impossible to evaluate whether or not the policy of stewardship has resulted in improved condition.

CHAPTER 6

A QUESTION OF CONDITION

More than any other concept, "range condition" dominates policy questions dealing with federal rangelands. Although the term is widely used, it is poorly understood and presents several serious problems for policy makers and land managers. Improving range condition is the central objective of experimental stewardship. Documenting changes in condition that result from an effective program are essential if ESP is to be successfully evaluated.

The concept of "condition" is unique to rangelands among land resources. Forest ecosystems, for example, are not classified as being in "poor" or "fair" condition. It is more likely that forests are classified according to site potential, stand density and growth rates. The forestry profession has avoided using a single measure of the "health of the forest," relying instead on multiple attributes. Rangelands, however, are often classified as poor, fair, good or excellent. Although the creators of this system assumed that their condition classes would describe seral stages relative to climax vegetation and not necessarily value for specific uses, policy-makers and members of the general public often assume that public rangelands should be

maintained in excellent condition.

A consistent definition of range condition is elusive. There is little agreement about which attributes of rangeland should be considered and little consistency in the methods used in measuring the attributes.

Smith (1979:52) writes that:

> The idea that the present status of rangeland in relation to its potential could be evaluated and used to indicate effectiveness of management and potential for improvement goes back to about the turn of the century. While the concept has been widely accepted, used and discussed, it is apparent that considerable confusion still exists relative to exactly what is being measured and why.

The Society for Range Management (SRM,1974) offers this definition:"the current productivity of a range relative to what that range is naturally capable of producing." A more detailed discussion is found in the Range Inventory Standardization Committee report of the SRM (1983:6).

> There are two approaches to range condition assessment. They involve different concepts of range condition and hence require different evaluations: (1) an evaluation of whether the long-term productive potential of sites is being maintained, and (2) an evaluation of the present level of production relative to the potential production for a given objective or use of the site...we recommend that..two terms with specific meaning (ecological status and resource value rating) be used for the two separate concepts.

One of the major emphases of PRIA was the requirement that the Secretaries of Interior and Agriculture periodically assess and report on the condition of the public rangelands. Such reports over time would indicate the effectiveness of public agencies in improving the public lands. In PRIA, Congress defined condition and assumed that methods for measuring it were comparable at least within and hopefully among federal agencies charged with management responsibilities. Neither is the case.

The initial declaration of PRIA states: "...vast segments of the public rangelands are producing less than their potential for livestock, wildlife habitat, recreation, forage, and water and soil conservation benefits, and for that reason are in an unsatisfactory condition."

PRIA's definition of range condition (p.47 in this paper) is broadly based and includes elements of soils, forage, wildlife habitat and watershed values. It includes both ecological status (the climax approach) and resource value rating approaches to range condition.

Coggins (1983:118) writes that using its own definition of condition Congress "...rejected the range managers' preferred, but even more amorphous rendering." The definition in PRIA certainly includes both the concept of ecological status and resource value ratings. But the condition assessment techniques employed by the

USFS, BLM and SCS are not nearly as inclusive as the Congressional definition requires. The techniques do not address the watershed values and wildlife habitat issues listed in the Congressional definition.

Federal land policy and range management in general have been dominated by the ecological status approach. Early range scientists were strongly influenced by the work of F.E. Clements (1916), a pioneer in describing the processes of plant succession. Dyksterhuis (1949),working on the short grass prairie of the great plains and Daubenmire, working on the sagebrush-bunchgrass communities of the Pacific Northwest, related the deteriorated rangelands to early stages of plant succession. Their worked formed the basis for the methodologies used by the SCS and BLM for determining range condition (Smith 1985)

On public lands administered by the BLM (and on private lands examined by the SCS) the closer the vegetation on a range site is related to its theoretical climax composition, as estimated by weight or percent cover, the higher the condition class score.

On lands administered by the USFS range condition is not based on ecological status but on a combination of factors including soil stability and the tendency of plants to increase or decrease when grazed by livestock and wildlife.

Neither the BLM nor the Forest Service methods are broad enough to consider the six elements of range condition which Congress included in the PRIA definition.

National Condition Assessments

Congress' findings in PRIA and the general consensus among policy makers that public rangelands are in "unsatisfactory condition" are the result of several assessments of western rangelands. Since 1936, six assessments of range condition have been published by the federal government or independent sources using government data. Direct comparability among the estimates is limited because different techniques and definitions were used in each survey.

The first extensive and systematic condition survey was published by the USDA in 1936. The Western Range (Senate Document 199) was a political document as well as a biological report. It was an attempt to convince the Congress and the president that the U.S. Dept. of Agriculture should have jurisdiction over all federal rangelands. At the time, administration of the grazing districts created by the Taylor Act was just beginning. Many millions of acres of public domain lands were not included in these districts and remained outside the jurisdiction of the of the fledgling agency.

Agriculture Secretary Henry Wallace (1936:v) wrote:

> Unquestionably the only plan which can be defended is to concentrate responsibility for the administration of Federal lands in a single department to avoid unnecessary duplications, excessive expenditures, and fundamental differences in policies, and to obtain the highest efficiency in administration and the maximum of service to users. Since the administration of the range resource and its use is agriculture, and since the administration of federally owned ranges can and should be used as an affirmative means in the rehabilitation of western agriculture, the grazing districts and the public domain should be transferred to the Department of Agriculture.

The Western Range indicated that 46.5 percent of the range on nation forests was in good and excellent condition and that 40 percent was in fair condition. Contrast this with 1.5 percent of the grazing districts in good or excellent condition and 14.3 percent in fair condition (See Table 15).

At the time of the report, the USFS had been managing grazing for almost 40 years. The rangelands included in the national forests were generally in higher elevations than the grazing districts. These areas have a greater potential for forage production as well as management response. The rangelands of the national forests are in many ways more forgiving than the residual, arid, public domain lands now administered by the BLM.

The 1936 estimates are based on "forage depletion" a concept that has not been used since in evaluating rangelands (1936:vii).

Range depletion on the public domain and grazing districts averages 67 percent, on private, indian and state and county lands about half, and on national forests about 30 percent...Only about 95 million acres of the entire range area is in reasonable satisfactory condition. Nearly half of the national forest range and 12 percent of private ownership falls in this category. The reasonably satisfactory areas in other ownerships are inconsequential. Probably not much over 5 percent of the entire range area is in a thoroughly satisfactory condition.

While The Western Range did not accomplish Secretary Wallace's objective of consolidation, it did establish two important precedents for the use of condition assessments. First as the basis of program evaluations and secondly, and perhaps more importantly, it established the use of condition assesments in support of political agendas.

A second national range condition assessment was not published until 1970. The Public Land Law Review Commission summarized range condition based on a report prepared by a consulting firm (PLLRC, 1970).

In the 30 years between assessments some remarkable things happened if one is willing to assume rough comparability of definitions. BLM lands improved markedly from 1.5 percent in the good and excellent class to 19 percent. The USFS lands declined from 46.5 percent good and

excellent to 20 percent good and excellent.

The percentage of USFS lands in the poor and bad category increased from 13.5 percent to 36 percent, while BLM lands in this category decreased from 84.2 percent to 29 percent.

The large changes make these comparisons questionable. It is highly probable that USFS lands did not decline spectacularly between 1936 and 1966. Rather one is led to suspect a degree of overstatement in the 1936 USDA report.

In the condition assessments that followed, percentages are similar through about 1977. The 1972 Forest Range Environmental Study (FRES, 1972) assessed range condition on all lands in the United States. They estimated that the non-forested, western range fell into the following categories: 18% good, 50% fair and 32% poor. This assessment was based on site potential or productivity. It does not conform to the more widely used ecological status concept but the USFS did categorize their assessment as "range condition."

In 1975, at the direction of a U.S. Senate appropriations subcommittee, the BLM prepared an estimate of range condition for the lands it administers. The BLM found that 17 percent of its rangeland was in good condition, 50 percent was in fair condition and 33 percent was in poor condition. The coincidence of the figures between the 1972

FRES report and the 1975 BLM senate appropriations report is startling.

In 1984, the BLM published another condition assessment for lands under its management (BLM, 1984). They reported that 36 percent of their lands were in the good and excellent categories, 42 percent were in the fair class and 18 percent were in the poor class. This represents a substantial change from the 1975, U.S. Senate report. The 1984 assessment is based on a compilation of all baseline resource records maintained at each of the Resource Areas within the BLM (BLM, 1984).

A comparison of these condition estimates is shown in Table 15. The 1984 BLM condition report would seem to indicate that an impressive improvement occurred since 1975. But the most recent assessment of range condition would seem to refute that. The NRDC and the National Wildlife Federation issued a report in December, 1985 (Wald and Alberswerth, 1985) based on condition estimates published in 116 of the 144 required environmental impact statements on grazing management. Their figures are also displayed in Table 15.

Table 15

A Comparison of National Range

Condition Estimates

YEAR	ASSESSMENT	PERCENT IN CONDITION CLASS		
		GOOD & EXCELLENT	FAIR	POOR
1936	WESTERN RANGE			
	BLM	2	14	84
	USFS	47	40	14
1970	PLLRC			
	BLM	19	52	29
	USFS	20	44	36
1972	FRES			
	ALL NON-FORESTED	18	50	32
1975	U.S. SENATE			
	BLM	17	50	33
1984	BLM/TAYLOR			
	BLM	36	42	18
1985	NRDC/NWF			
	BLM	29	42	29

A Strategy of Overstatement

A policy question of some interest revolves around whether or not the BLM and the USFS have consistently overstated the range condition problem in order to secure funding and other resources. Fairfax (1984:1715)

> The BLM has contributed enormously to the "hell in a handbasket" perception with numerous early 1970's pronouncements (particularly the infamous Nevada Report) of pending doom which were apparently designed to obtain increased management funds from Congress.

The BLM is not alone in this position. Henry Clepper (1971) writes:

> ...early reports of range conditions were on occasion distorted and technically in error. The angry concern of those charged with the protection of the public lands may have led to exaggeration, but it demonstrated the need for improved management to prevent destructive grazing...sensationalism ;helped overcome the apathy and indifference of the responsible policy makers. (quoted in Nelson (1980:43).

Nelson (1980:40) observes: "Despite the uncertainties of the data, BLM employed the Senate Range Condition Report as a primary justification for its request for a large scale investment program on public rangelands."

Former BLM Director Curt Berklund reported to a House subcommittee:

> "BLM believes the best solution for significantly correcting these deficiencies (in range condition) is acceleration of the intensive management and development of a program to arrest deterioration and increase the productivity of the public lands for a multitude of uses."

Overstatement of a problem in order to attract attention and resources so that a solution may be applied seems a fairly common policy strategy. One of the risks associated with this strategy is the failure to effect a solution after bringing it to the attention of oversight committees.

This is precisely the situation in which the BLM has found itself after several years of decrying deteriorating range condition in the early 1970's. Congress, the environmental groups and livestock producers are all anxiously awaiting the results of "intensive management and development" which the BLM has implemented since completing many environmental impact statements.

Despite increased scrutiny from Congress and its divergent constituencies, the BLM is not in a position to offer evidence of condition improvement in the stewardship areas (and on many other lands) because monitoring and evaluation programs have been controversial and relatively late in establishment.

This late recognition of the inventory and monitoring problem coupled with the long periods required for changes to occur in arid environments has left the BLM

in a very weak position with its constituencies, the courts and its oversight committees.

Without evidence to indicate that BLM's management strategies are working, the interest groups are becoming restless. Wald and Alberswerth (1985) use the Bureau's own data to support their claim that declining grazing fees are related to range deterioration. Alberswerth (1984) states:

"There are two major reasons for the unsatisfactory condition of our Western public rangelands. They are insufficient funding for range management and range improvement programs and mismanagement of domestic livestock grazing." Alberswerth and Wald (1985) indicate that increased grazing fees will eventually improve range condition by making more money available for range improvements.

The BLM took a calculated risk in sounding the alarm over deteriorating range condition. It discovered too late that it did not have an adequate monitoring system to prove that its management had resulted in improvement and the result has been a loss of some credibility with its constituencies and oversight committees.

Contrast this with the actions of the USFS in the same period. The Forest Service has largely managed to escape the range condition controversy by insisting that their rangelands remain in generally good condition, despite declining range budgets. Despite a PRIA requirement that

the Secretary of Agriculture maintain a record of range condition and trend (just as the Interior Secretary must), the data have never been compiled nationally or made available to the public.

One range staff officer interviewed in this study commented that improving range condition on his forest was "not really a problem. Our lands are not screaming out for improvements like they were a few years ago."

Yet a cursory examination of Forest Service lands included in the stewardship area showed that utilization on some meadows was approximately 80 percent and that substantial gully erosion was occurring. In addition, by their own estimates a larger percentage of USFS lands within the Modoc-Washoe area are in poor condition than are BLM lands (Table 9). It would seem that the USFS has done a better job of managing the condition conflict than has the BLM, although in some areas the BLM may be doing a better job of managing the range.

By avoiding the condition controversy and the associated arguments about inventory and monitoring, the Forest Service's range program is in a stronger political position than is the BLM's. As Clarke and McCool (1985) indicate, the USFS is typified by its ability to manage controversy effectively.

From the BLM's perspective, the range condition-inventory and monitoring controversy must be frustrating. In this study, it is unlikely that BLM lands are significantly different in condition than USFS lands despite the fact that the BLM has been often taken to task by environmental groups while the Forest Service remains unscathed.

The difference is more likely the USFS' ability to adroitly manage the controversy and balance the interest groups. The USFS has weathered range management controversies before and successfully put them to rest. It seems likely that USFS managers are using their experience to successfully avoid the position that the BLM finds itself in.

CHAPTER 7

ECONOMIC ISSUES

Often, economic issues associated with managing livestock on public lands are cast in terms of private versus public ownership. Libecap (1981) and others have argued that significant improvement of the range resource would only occur given strong individual property rights for rangeland users. This view is popular among many western conservatives, but it is not viable politically as the short-lived "sagebrush rebellion" indicates.

Kelso (1977:815) suggests that the dichotomous question of public versus private ownership of federal grazing lands is better addressed as a problem of landlord-tenant relationships:

> the solution for the private grazier users was to recognize and accept their status as tenants on much of the public lands and to work for improved landlord-tenant relations between themselves and the public landlord.

The stewardship program adopt's Kelso's approach. It avoids the head-on conflicts advocated by some cattlemen and environmentalists and seeks to strengthen the landlord-tenant relationship, allowing both parties to achieve their goals: increased rangeland outputs for multiple use and a profitable ranch economy.

These goals are not necessarily mutually exclusive. Cooperative management represents a recognition of the transition from a frontier economy to a finite system. The basic premise of the transition is that a more intensively managed finite system can increase the outputs of the land resulting in decisions about distribution of additional goods rather than reallocation of existing resources. It is essential that all of the interests participate in this process if social conflicts are to be minimized.

The interest groups involved in the stewardship program are in the process of adapting to new allocations. It is a welcome effort and it may serve as a model for other resource allocation conflicts that have hit the stone wall at the end of the frontier.

Ciriacy-Wantrup (1952:159) discussed the value of the cooperative-local approach for resolving conflicts and strengthening landlord-tenant relations through increased tenure more than 30 years ago.

> A widening of the administrative functions of these [grazing advisory] boards besides their advisory function is advocated by livestock interests. Such a change may not be objectionable provided **all** users of public land, including wildlife and recreation interests, received proper representation. Public servants would be strengthened in their attempts to avoid an imbalance of tenure rights if conflicts of interest are frankly discussed and as far as possible settled within advisory boards.

A meaningful social objective for this program is not using raw materials so that profits may be maximized, but improving the overall value of the resource stock.

The livestock producer is faced with a transition from Boulding's (1966) "illimitable plains" and the romantic past associated with them to a new economy where

> the measure of success ...is not production and consumption at all, but the nature, extent, quality and complexity of the total capital stock, including in this the state of the human bodies and minds included in the system.

Rather than attempting the politically and economically unenviable task of extricating the cattleman from the public lands, conservationists' interests would be better served by assisting in this transition. Wildlife habitat, livestock production and recreational opportunities on the public lands will be gradually improved through better management in the future. What is left in question is the manner in which these improvements will occur. Experimental stewardship offers a solution consistent with Boulding and Kelso's prescriptions for a rational system of economics in a biologically cyclical world.

This chapter reviews several economic issues associated with the policy of stewardship. Economic incentives are specifically mentioned in the enabling legislation and are an important component of the program. Economic analysis of a single stewardship area would be a

dissertation in itself. The study did not attempt a complete economic analysis, rather it examines several policy issues related to stewardship that are best seen in light of an economic policy model.

The Case for Positive Incentives

The BLM's management of public rangelands has traditionally been characterized as weak (Clarke and McCool, Foss, Vogt and many others) A lack of funds and personnel to carry out vigorous enforcement programs has forced the bureau to rely upon the cooperation of the stockman for carrying out management plans.

This perceived weakness has not often been visited upon the USFS which is often held up as a "model bureaucracy." But recent budgetary decisions have left the USFS range program in some of the stewardship areas in a situation similar to the Bureau's.

Tables 16 and 17 display USFS and BLM budgets for the national range management program. Both agencies have sustained significant cuts since 1980. The range staff officer on one forest in this study estimated that his budget had declined from $600,000 in 1980 to 250,000 in 1985; a decrease of more than 58 percent.

BLM's national range budget has declined by more than eight percent between 1983 and 1985 without considering inflation.

TABLE 16

BLM Rangeland Management Appropriations

1980-1985 (000 OF $)

	E L E M E N T					
YEAR	GM	WHB	RBF***	SWA	WHM	TOTAL
1980	36,860	5,150	10,620	19,230	15,880	87,730
1981	43,655	6,660	13,500	22,073	19,763	105,651
1982	35,620	5,366	13,226	16,932	14,778	85,922
1983	34,169	4,812	11,199	16,946	14,942	82,068
1984	37,904	*	10,000**	16,572	13,604	78,080
1985	31,594	16739	10,000**	16,544	15,783	90,660
% change 1980-85	-14.29	+225	-5.84	-13.92	-0.61	+3.34

GM Grazing Management
WHB Wild Horses and Burros
RBF Range Betterment Fund
SWA Soils, Water, Air
WHM Wildlife Habitat Management

*37904 is combined GM and WHB
** Statutory Minimum
*** RBF is derived from fees

TABLE 17

USFS Range Management Appropriations

1980-85[1,2] (000 OF $)

YEAR	RANGE ELEMENT	RBF*	TOTAL
1980	36,227	5,633	41,860
1981	25,566	6,940	32,506
1982	27,287	6,583	33,870
1983	27,031	5,378	32,409
1984	27,267	4,028	31,295
1985	28,170	3,966	32,136
% change 1980-85	-22.24	-29.59	-23.23

1 Source: Hearings before USHR Subcommittee on Appropriations for Interior and Related Agencies.

2 Includes grazing management, range forage and structural improvements, horses and burros and noxious weeds.

*RBF is derived from fees.

A forest supervisor interviewed in this study commented: "Funds for range management are declining seriously because there is no perceived need for additional red meat production in Congress. Very few Congressmen recognize the multiple-use of rangelands."

Given declining budgets in the recent past and the potential impact of the Gramm-Rudman-Hollings law, resource agencies have a significant financial incentive for developing management programs which create and reward stewardship among permittees. At the same time, the agencies must find a way to insure that the ability to enforce use regulations is retained. Properly implemented, experimental stewardship is to provide the incentives for individuals whose management of the public lands results in improved condition. But this classical "carrot and stick" approach will be meaningless if stockmen perceive that the rewards associated with the program are not greater than the risk of incurring penalties.

BLM and Forest Service personnel interviewed in this study in all three areas complained that trespass was still a "significant" problem with some operators and that they lacked the personnel to provide an effective deterrent.

Grazing Fees, Range Improvement Funds and Grazing Fee Credits

The fee charged for grazing livestock on the public lands remains the most emotionally charged issue in livestock management on public lands. The debate is highly symbolic and remains the focal point of conflict between environmentalists and livestock producers. In this study, it is not the amount of the fee that is significant but the

manner in which it is collected and redistributed.

The current grazing fee formula was established in PRIA at the same time as the stewardship program. One of the incentives for good stewards of rangelands specifically mentioned in the legislation is the fee credit, "the payment of up to 50 per centum of the amount due the Federal Government from grazing permitees in the form of range improvement work."

The USDI and the Bureau initially opposed the stewardship program on the basis of this provision, arguing that the Secretary has ample authority to enter into experimental agreements under FLPMA. The Department and Bureau were particularly opposed to specific language linking a "less than fair market" fee to a package of incentives for good stewardship (Gregg, 1978; Martin, 1978). Under current formulae, a portion of the grazing fee is made available for purchasing improvements on federal rangelands. These improvements typically include fencing, water developments and vegetative manipulations through fire, seeding or herbicide application.

Distributions of fees and revenues and an estimate of funds available for range improvements are presented in tables 18 and 19.

TABLE 18

Grazing Fee Revenue Distribution

Agency	Range Fund %	County %	State %	U.S. %
BLM(1)	50	0	12.5	37.5
BLM(2)	50	0	50	0
USFS	50	25	0	25

1 "Section 3" lands included in Grazing Districts
2 "Section 15" lands outside Grazing Districts

TABLE 19

Grazing Fee Receipts
(000 of $)

Year	USFS	BLM	Total
1980	15,849	24,600	40,449
1981	14,889	24,840	39,729
1982	12,426	20,879	33,305
1983	10,183	16,700	26,883
1984	9,618	15,015	24,633

While livestock use remained essentially unchanged, total grazing fee receipts declined by a little more than 39 percent between 1980 and 1984. A little more than $12 million was available to the range betterment fund in 1984 compared with an estimated $20 million in 1980. The decline in revenue is the result a fee structure based on varying prices and costs of production.

Improving range condition costs money. Improved management often requires implementing rotational grazing systems that may require extensive fencing and developing new water sources. In the three stewardship areas, keeping livestock off bunchgrass ranges until late spring was considered a common need. One solution to this problem is planting crested wheatgrass (Agropyron cristatum) pastures which tolerate early use, deferring native pastures until later in the season when they can tolerate livestock grazing.

An SCS range conservationist interviewed in this study estimated the cost of developing crested wheatgrass pastures at $50 per acre (not including the cost of procuring alternate pastures during at least two seasons of nonuse to insure establishment).

Such an investment is almost impossible to justify based on livestock production alone; thus ranchers are reluctant to undertake reseeding on private lands when their only cash crop is cattle.

On public lands the agencies often lack the funds to establish physical improvements to improve range condition. A system that would increase the amount of money available for improvements has definite advantages in a time of cash-short agencies and ranchers. To date the fee credits have been used widely only on the Modoc-Washoe site. Several of

the ranchers and BLM range conservationists praised this aspect of the program.

Some Forest Service personnel were supportive of the effort. One individual suggested that the fee credit program did allow more flexibility and probably resulted in lower total costs for improvement work because many constraints on governmental contracting could be avoided when the permittee did his own work. But most of the USFS personnel interviewed in all three areas generally resisted the idea of fee credits.

Where Does the Money Come From?

Throughout the history of the stewardship program there has been a lingering question about how the program is financed. Generally each committee has been careful to state that no additional funds have been made available for the operation of the stewardship program. Although there is some evidence to the contrary (Meeting summary, USFS-BLM Stewardship Meeting, 12-13-79):

> "Jack McIntosh responded that the BLM and Forest Service both may get more money, and that everyone will benefit from increased productivity. The Challis program, for example, resulted in $300,000 extra for BLM's Salmon District since it started."

A relevant concern beyond the question of whether or not additional funds have been made available is whether or not stewardship programs tend to drain funding away from

other non-stewardship allotments in a district or resource area. Both Forest Service and BLM managers responded that this was the case, although they doubted that the impact was serious.

Actual Use Billing

Traditionally, livestock operators have paid their grazing fees on March 1st for the coming grazing season. Operators are billed for the full amount of their permitted numbers. In northern states livestock do not usually begin to graze on federal lands until May or June. Thus the federal government has use of the fees paid for 60-90 days before the livestock actually harvest the public forage.

Under actual use billing, the permittee pays the grazing fee at the end of the season (in the north, this is typically September 15 or October 1) and then only for the amount of forage actually used. If a particular allotment has a permit for 150 animal units and because of market conditions, the stockman chooses to run only 135, the government receives payment for 135 animal units multiplied by the number of months on the allotment.

The traditional system is clearly to the advantage of the government. The actual use system gives the cash flow advantage to the stockmen. Actual use billing is available to all permittees in stewardship areas and regulatory

authority for extending this provision is available on BLM lands with or without stewardship programs. (CFR 4130.7-1).

There is clearly an equity argument associated with the question of actual use billing. As one Forest Service administrator said: "It simply comes down to who is going to have the use of that money during the grazing period. We think it should be the U.S. Treasury."

There was strong support among BLM personnel and stockmen for actual use billing (which is available to all stewardship permittees on BLM allotments and to USFS permitees on the Modoc-Washoe area). Generally, the USFS local administrators interviewed opposed actual use billing. One USFS range administrator said that actual use did not discourage early use nor did it lessen the pressure to use all of the available forage.

A Montana range conservationist commented that actual use billing had a very important, unanticipated, side effect--it forced the rancher to keep better records. A common emphasis of educational programs for livestock operators is on record keeping. Scraps of paper or a plank on the barn door or the bottom of a tobacco can have been the traditional repository of use records for many stockmen.

Actual use billing makes the rancher responsible for keeping good records. If he fails to maintain adequate records he will not be eligible for actual use billing and

the enhancement of his cash flow which it allows. This strategy may provide a solution for what has been a very difficult problem and it fits very well in to the intent of the program.

Reducing Agency Costs

Allotment management plans (AMP's) are the mechanisms which the agencies use to implement plans on livestock allotments. These signed documents state the specifics of the agreements between the agency and the rancher. In areas without the stewardship program, implementation of the AMP is the responsibility of the managing agency which must consult with the permittee during its development.

In the stewardship program the committee is responsible for the development of the AMP. On the Modoc-Washoe, the committee estimates that the total cost of developing an AMP in 1981 decreased from approximately $7,000 without stewardship to approximately $6,000 with the program. In the first case the entire cost was borne by the BLM, in the latter case the BLM's cost was only $1,700, the remaining costs were born by other agencies and individuals.

An economic analysis prepared by the Challis stewardship program suggests that 23 AMP's were developed and implemented in 6 years rather than an anticipated 12

years by using the stewardship process. The report (Challis, 1985) states that over a 25 year period, savings from implementing the stewardship process will have a present value of a little more than $60,000.

It is important to note that these are savings to the agencies directly responsible for implementing the AMP's. In many cases other federal agencies such as the SCS and the Cooperative Extension Service have incurred expenses that would have normally been avoided.

The case for experimental stewardship truly reducing the costs of implementing an AMP remains to be demonstrated conclusively. But from the standpoint of the agency, ESP has reduced the direct costs for developing these plans.

State wildlife agency officials interviewed in this study were particularly sensitive to the issue of increased costs for participating in the stewardship program. A high-level wildlife agency manager commented that he could not afford to participate in several stewardship programs for lack of budget and personnel.

Avoided Costs of Appeals

Another potential saving that might accrue to both the agency and the rancher are the avoided costs of administrative and court appeals over grazing decisions. Under the terms of the Administrative Procedures Act (APA) an individual who is adversely affected by an administrative

decision may appeal that decision. These appeals are heard first by the agency that made the decision and then progress through the department to the Secretary. If the individual does not achieve satisfaction through administrative appeal, he or she may then proceed to the federal courts.

The administrative appeal procedure is laborious and expensive both to the individual and to the government. One of the notable successes of ESP has been the lack of appeals of the decisions reached in the committees.

Information supplied by the Dept. of Interior's Office of Policy Analysis (Nelson, 1986) suggests that no attempt has been made to determine the average cost to the government for a grazing appeal. One can only note that such costs are certainly substantial for both parties involved in an appeal.

The combined stewardship committees write:

> The appeal process varies between the USFS and the BLM, but the outcome is often a long delay in implementing the decision. Until the appeal is finally resolved by the higher official, the decision is generally held in suspense. The appeals not only cause a loss in time in implementing the decision , but also cost the Agencies additional expense to process the appeal. Because the various interests participated in the development and implementation of the ESP plans, they are more committed to make the program work and are less inclined to appeal the land manager's decision.

The Case for Multiple Use

Stewardship committees have consistently suggested that they are interested in the management of all uses of rangelands. Cleary (1984:166) writes:

> The founders of, and participants in, the Modoc/Washoe Program see range management, or stewardship, as more comprehensive than livestock management. We have chosen to address all resources of the rangelands and to accommodate, if possible, all needs of public land uses in our planning and management.

In fact, the Susanville District has used the stewardship structure in developing wilderness classification proposals. In the East Pioneer area, agency managers are discussing using the Stewardship Committee to make recommendations on recreation management plans for the Big Hole River.

As one might expect, because the stewardship areas have been dominated by conflicts over livestock management, most efforts have been directed to implementing improved livestock management programs through allotment management plans. But if the stewardship process is to truly succeed, it must begin to bring its attention to bear on the management of other rangeland uses.

One of the primary objections of the environmental groups has been that ESP is a "cow management program." Environmental groups that have been critical or cool toward the program will have greater interest in developing plans

for recreational and wilderness uses if it is truly a multiple use program. These concerns must be addressed not only in the development of AMP's, but in the planning and management processes required for other resource uses. A simple economic analysis using the land use figures provided by the stewardship committees puts the relative value of the range resources in perspective.

The Experimental Stewardship Review Draft (1985) provides average rangeland use of the stewardship areas between 1980 and 1984. Uses include: livestock grazing, hunting, fishing, wilderness use, camping, dispersed recreation , timber harvested, wild horses and mineral values. The report also lists municipal watershed protection as a use. No attempt has been made to value the watershed because estimates of production are not available.

Estimating Recreational Values

Sorg and Loomis (1984) have developed estimates of the average consumer surplus values for recreation based on a synthesis of several published and unpublished studies. The synthesis combines travel cost methodologies with contingent valuation methods.

Based on their work, average values for recreational activities in the west were calculated and multiplied by the recreation use data provided in the Draft Review and the annual reports written by the stewardship committees to get

estimates of total value. Average values developed for this study are displayed in Table 23 of Appendix 2.

Estimating Forage Values

Estimating an appropriate value for a unit of federally grown forage is a popular pastime among western agricultural economists. This issue is generally approached as a part of determining appropriate grazing fees. In this study, the level of the fee is only of passing interest. Determining an appropriate value for use in comparison among other rangeland outputs is more important.

In all cases range forage is an intermediate good used to produce other rangeland outputs. The value of livestock forage is dependent upon the value of the livestock produced.

Estimating the value of range livestock forage as the sum of consumer and producer surpluses is the ideal method for this estimation. But this would require the development of regional demand and supply curves; an undertaking too expensive for the agencies involved. Because of this problem other methods are used.

Three methods are commonly used to estimate the value of public range livestock forage. They are 1) comparisons with market-priced forage; 2) capitalization of

permit values and 3) production analyses. For the purposes of this study all three methods were used to estimate the values of the livestock forage on the stewardship areas. A detailed discussion of the methodology is contained in Appendix 2.

Using the three methods, estimates of the aggregate annual value of livestock forage were determined for each stewardship area. They are presented in Table 20. Livestock forage values on a per AUM basis are presented in Table 22 in Appendix 2.

Livestock forage estimates are based on use numbers provided by the stewardship committees in their final report. These values are compared with values for other rangeland outputs in Table 21.

TABLE 20

Summary of Estimated Livestock Forage Values on Experimental Stewardship Areas

Method	Challis	East Pioneer	Modoc-Washoe
Production Analysis	312,444	226,390	1,287,187
Comparative Appraisal	194,283	138,879	657,208
Permit Market Value	227,705	162,770	992,206
Mean Average	244,811	176,013	978,867

Based on the estimates in Table 21, it is clear that recreational values exceeded livestock forage and timber values on all three stewardship areas in 1983. While it is certainly true that the stewardship program was targeted at solving livestock-related problems on public lands, there is a strong multiple use orientation in the legislation. If the objective of the stewardship committees is indeed wise multiple use of the rangeland resource, then these estimates will be useful in determining the mixture of emphases that the committees should undertake.

A re-examination of the mix of emphases that the committees are currently pursuing is appropriate at this juncture because the important initial process of developing and implementing the AMP's is nearly complete.

TABLE 21

Estimated Aggregate Annual Value of

Rangeland Outputs on Three Stewardship Areas

Output	Modoc-Washoe	Challis	East Pioneer
Fishing	3,718,000	220,000	748,000
Hunting			
Deer	1,404,000	208,000	286,000
Antelope	199,500	7,600	11,400
Elk	-	198,000	666,000
Upland Birds	1,885,000	23,200	14,500
Dispersed Recreation	2,478,000	168,000	736,400
Wilderness Use	1,260,000	-	-
Camping	1,417,000	132,600	100,100
Subtotal Recreation	12,361,000	957,400	2,605,400
Livestock Forage Value	978,867	244,811	176,013
Estimated Timber Value	2,927,000	155,200	950,600

CHAPTER EIGHT

CONCLUSION

"Good" policy is as elusive or perhaps more elusive than "good" science. Nevertheless it is necessary at the very least to evaluate a policy in terms of how successfully it addresses the issues which engendered it.

Several substantive issues and two hypotheses have been raised in the disscussion thus far. The hypotheses are treated first and a review of several other important issues follows.

The first hypothesis that "the experimental stewardship program has reduced conflicts among competing user groups in the stewardship areas" is strongly supported by at least two kinds of evidence. First, the difference in the number of grazing appeals on the Modoc-Washoe area before and after implementation of the stewardship process on adjacent planning areas (p. 68). Second, the indication of 68 of the 70 program participants interviewed, that conflicts among user groups had lessened as a result of the program.

The second hypothesis "that existing agency methods of evaluating range condition are inadequate for evaluating the stewardship programs management objectives" is supported

by simply examining the diverse methodologies of the agencies for determining range condition and comparing them with the explicit Congressional intent of P.L. 95-514. Not only do methodologies for determining range condition vary among agencies, there has been no attempt made to scientifically determine the impact of the program on a number of multiple uses such as recreation and wildlife management. This lack of objective evaluation is a serious drawback for proponents of the stewardship program.

Range Condition

Improved range condition is the stated goal of the legislation that created the stewardship policy. Unfortunately the methods used by federal agencies are inadequate for determining condition within the broader definition conceived by Congress. By maintaining a system of condition evaluation based on ecological status and failing to adopt a system of resource value ratings, the agencies have frustrated the will of Congress and resisted progressive multiple use management on public lands. This failure contributes to the eroding credibility of the managing agencies with their constituencies.

This is particularly critical within the experimental stewardship areas. Evaluation of the ESP mandate requires a broadly-based evaluation system that considers all of the

multiple uses of the stewardship areas.

Has the policy of experimental stewardship resulted in improved range condition? No one can truthfully answer that question. As far as could be determined in this study the managing agencies did not establish the condition of the resources inside the stewardship areas and in adjacent non-stewardship areas before implementing the experiment. Establishing a mechanism for evaluation should have been one of the first priorities of the program. The evidence collected in this study and in others points to many successes that have resulted from the stewardship policy, but failure to implement a well-conceived evaluation procedure before implementing the program is handicapping the effort.

Opponents of the stewardship policy will (and have) use the lack of firm evidence to retard or oppose extension of the program. If no other lesson is learned from the ESP effort it should be this: document resource conditions before, during and after the implementation of a highly visible experimental program. Without conclusive evidence and objective criteria or standards of performance, opposing interest groups will continue to disagree.

Representational Issues

If cooperative management is to be effective, all of the affected interest groups must participate in the process

of planning and decision making. It is the involvement of all groups at the local level that differentiates the stewardship policy from its failed predecessor of home rule on the range.

The Modoc-Washoe and the Challis stewardship committees have made efforts to insure the participation of organized national and regional citizen conservation groups. Without the participation and support of these interests, the decisions implemented by the stewardship committees and agencies will be subject to administrative and judicial challenges.

It is important that the committees actively recruit representatives of environmental groups even if they are not actively organized within the stewardship areas. The success of the stewardship policy hinges on this critical factor.

It is in the best interest of all groups to participate in the stewardship process if they are committed to improved multiple use management of public lands. The burden of insuring participation should not be the stewardship committees' alone. Conservation groups and local governments have a stake in the outcome and should participate in the process in good faith.

There is a problem and an irony for national environmental groups in this policy. The problem is finding the fiscal resources to allow members to participate in local decision-making and planning processes that often

occur in isolated rural communities. The stewardship process is time-intensive (a trade off that must be considered against the lower direct cost to the managing agencies) and requires many hours of travel as well as meetings.

The irony is that it was legal action by an environmental group (the NRDC) that forced local planning units on the BLM. National environmental groups must now find a way to participate in localized planning. The successful strategy of national conservation groups concentrating their efforts on litigation and lobbying at the national level does not lend itself to intensive participation at the site of the conflict.

The final issue in the representation/participation category is improved communication and cooperation among the interest groups and agencies. Much of the published material from the stewardship committees stresses this aspect of the policy. There has been a substantial improvement in communication and cooperation among the agencies and between the agencies and the livestock producers. In some areas communication and cooperation has improved among environmental groups, livestock producers and land management agencies.

This improvement may be the greatest achievement of the stewardship policy. It was one of the stated objectives

of the legislation and it is almost always the first achievement that participants point to.

Experimentation

The stewardship policy has been effective in introducing and evaluating new methods of public rangeland administration. It has encouraged management flexibility in federal agencies that have been notable for inflexibility. While the Secretaries of Interior and Agriculture have had the authority to enter into experimental agreements, they have largely avoided it. The stewardship program has allowed the intermingling of private and public resources so that management efficiency has increased and the productivity of both public and private lands have improved in several cases.

Organizational Issues

The conclusions of Clarke and McCool are particularly well-illustrated in this study, especially regarding agency approaches to the question of range condition. The Bureau of Land Management faces a loss of credibility with its constituencies and Congress as a result of overstating the deterioration of rangeland condition throughout the early 1970's. As a result of these claims, the agency was given additional resources for improving condition. But without a satisfactory system for monitoring and measuring changes in condition as a result of new management techniques, the

Bureau is unable to prove that condition has improved. The strategy of overstating deteriorating condition was a gamble aimed at securing additional resources from Congress. It might have been successful if the agency was in a position to document the improvements which resulted from applying the additional resources.

Contrast this approach with that of the Forest Service which has maintained that range conditions on the National Forests and National Grasslands have been steadily improving since the 1940's. Even though USFS range budgets have declined since the mid-1970's, Forest Service statistics show continued improvement in range condition. One result of this managed perception is avoiding criticism from environmental groups (such as the NRDC) about livestock management on the National Forest System.

It would seem that in the world of politics and bureaucratic agendas, the perception of competence among agency clientele is more important or at least equally as important as the substance.

Economic Issues

Within the area of economic evaluation there are several significant issues. The policy of stewardship has resulted in reduced direct costs to the federal land management agencies involved in the process. These reductions in cost are well documented by the stewardship

committee annual reports. These savings are the result of spreading the direct costs of the agencies to other individuals and organizations. The total costs of developing and implementing the allotment management plans may have in fact increased. But the costs incurred by the USFS and BLM have declined significantly.

The assumption of these costs by other federal agencies, state and local governments and citizen groups is probably one reason why some groups have been reluctant to participate or to endorse rapid expansion of the stewardship policy and its application to several resource conflicts within a state or other jurisdiction.

Because the number of administrative and judicial appeals have been significantly reduced by the stewardship policy, savings have accrued to both the federal government and the groups and individuals that would have appealed the plans. The number of appeals that have been avoided have been well documented in the annual reports of the committees and the Range Program Summaries of the BLM. However, the value of the avoided costs remains to be calculated. If the agencies or committees choose to undertake a detailed economic analysis, the value of these avoided costs should prove interesting.

Finally, the stewardship committees and the resources administered under this policy would benefit from the

application of simple economic methods for valuing the outputs of the public rangelands involved. One must remember that the stewardship policy envisioned by Congress was designed to solve resource conflicts among livestock graziers and other public land users.

Valuation of the outputs from the stewardship areas should not suggest maximizing some resources at the expense of others. But simple assessment of resource outputs is helpful in identifying the demand for rangeland outputs in the local areas. It appears that the value of recreation on all three stewardship areas is much greater than the value of the livestock and timber production.

It would be interesting to asses the value of the watershed in these areas. It is entirely possible that the value of the water produced easily exceeds the value of all other outputs combined.

If the stewardship areas are indeed examples of multiple use and multiple user management, then additional emphasis must be placed on planning and management of <u>all</u> of the resources. More than any other task, balanced multiple use planning and management represents a challenge to the interest groups and agencies involved in the stewardship process. The policy and the program will be judged a success only when balanced multiple use is achieved.

"Good" Policy

Does experimental stewardship represent "good" policy? It is certainly better policy than "home rule on the range" and range management by court order. In an incremental sense it is "better" policy.

The first test of the success of stewardship will come over the representation and effective participation of all of the involved interest groups. Only when all of the interest groups participate and perceive the results to be fair can the stewardship process claim success.

The second critical (and still unanswered) question will revolve around the issue of objective evaluation of the attributes of range condition. Until the agencies, the scientific community and the interest groups agree upon objective criteria and methods for measuring range "condition" there will be little agreement on whether or not the policy of stewardship has met the objective of improved range condition that Congress set for it.

APPENDIX 1

LIST OF ABBREVIATIONS

AMP	ALLOTMENT MANAGEMENT PLAN
AHPA	AMERICAN HORSE PROTECTIVE ASSN.
APA	ADMINISTRATIVE PROCEDURES ACT
ASCS	AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE
BLM	BUREAU OF LAND MANAGEMENT
CMA'S	COOPERATIVE MANAGEMENT AGREEMENTS
CRMP	COOPERATIVE RESOURCE MANAGEMENT PLANNING
EIS	ENVIRONMENTAL IMPACT STATEMENT
ESP	EXPERIMENTAL STEWARDSHIP PROGRAM
EVAL	OREGON RANGE AND RELATED RESOURCES EVALUATION PROJECT
FLMPA	FEDERAL LAND MANAGEMENT AND POLICY ACT
FRES	FOREST RANGE ENVIRONMENTAL STUDY
ICL	IDAHO CONSERVATION LEAGUE
IWL	IZAAK WALTON LEAGUE
NEPA	NATIONAL ENVIRONMENTAL POLICY ACT
NPS	NATIONAL PARK SERVICE
NRDC	NATURAL RESOURCES DEFENSE COUNCIL
NWF	NATIONAL WILDLIFE FEDERATION
OMB	OFFICE OF MANAGEMENT AND BUDGET
PRIA	PUBLIC RANGELANDS IMPROVEMENT ACT
RCD'S	RESOURCE CONSERVATION DISTRICTS
SCS	SOIL CONSERVATION SERVICE
SNRA	SAWTOOTH NATL. RECREATION AREA
SRM	SOCIETY FOR RANGE MANAGEMENT
SVIM	SOIL, VEGETATION INVENTORY AND MONITORING
USDI	U.S. DEPT. OF THE INTERIOR
USFS	U.S. FOREST SERVICE
USFWS	U.S. FISH AND WILDLIFE SERVICE

APPENDIX 2

ESTIMATES OF FORAGE VALUES AND RECREATIONAL VALUES

Comparisons of federal forage values with private lease values have been resisted by the livestock industry because they are not directly comparable. Permittees on federal lands do not have exclusive use of their allotments and must pay part of the costs of improvement and maintenance. In addition their security of tenure has been weakened in recent years by reductions in permitted herd size.

Ling and Hodel (1986:15) submitted adjusted estimates of appraisals of private grazing leases to Congress as a part of the grazing fee evaluation requirement of PRIA. They contend that adjusting private lease rates to account for time of payment and variations in lease conditions (-15 percent) yields "a reliable indicator of the average market value of public leased rangelands."

Estimates derived for this study are based on "pricing areas" developed for the grazing fee study. In this case both the East Pioneer and the Challis stewardship areas are included in area 3. The Modoc-Washoe stewardship area is included in area 4. Forage value estimates derived by this method are displayed in Table 22 of Appendix 2.

Many livestock operators have suggested that capitalized permit values are a better indication of the value of federal forage. Grazing permits on federal lands are "bought" and "sold" with base ranch properties. The federal agencies do not recognize this price in their calculation of grazing fees, but the sales take place none-the-less.

Roberts and Topham (1965) give the value of the public range for livestock grazing as:

$$V = F + PC \qquad [1]$$

where V is the annual value of public forage to ranchers, F is the grazing fee, P is the market value of the grazing permit, and C is the capitalization rate.

Martin, Tinney and Gum (1978) write that an appropriate method for estimating the potential competition between hunting and cattle ranching is estimating the aggregate consumer and producer surplus. The authors suggest that producers' surplus is equivalent to annualized ranch sale prices, i.e. PC in equation 1.

Using equation 1, forage values for livestock grazing on the stewardship areas were estimated and are presented in Table 20. The estimates are based on the following assumptions: 1) the market value of the grazing permit (P) is equal to $2,000/AU; and 2) a capitalization rate of four percent (Guldin, 1986).

The third approach to forage valuation is production analysis (Bartlett, 1984). The estimates of range forage values included in the 1985 RPA Update (USFS,1984:F-14) are calculated on this basis. The USFS contracted with the Economic Research Service (ERS) to develop livestock enterprise budgets and linear programming models for each national forest and national grassland. "The range forage value produced by each LP solution represents the value contributed to return above costs per AUM on National Forest System lands."

TABLE 22
Estimated Value of Livestock Forage Per AUM
on Three Stewardship Areas

Method	Challis	East Pioneer	Modoc-Washoe
Production Analysis	11.00	11.15	10.40
Comparatie Appraisal	6.84	6.84	5.31
Market Value	8.02	8.02	8.02
Average	8.62	8.67	7.91

Estimated Recreational Values

Estimates of recreational value used in this study are estimates of the net value (value in excess of actual expenditures) based on contingent valuation and travel cost methodologies. Sorg and Loomis report numerous values for a variety of recreational experiences.

Recreational activities reported in this study are based on the activities reported by the stewardship committees. The values used are averages of the values reported by Sorg and Loomis for recreational activities in western states. For example, values reported by Sorg and Loomis for big game hunting in Pennsylvania and Louisana were not used in the calculation of averages for the stewardship areas.

TABLE 23
Average Estimated Values of Recreational Activities for the Western States

Activity	Dollars/User Day
Cold water fishing	22
Hunting	
deer	52
antelope	19
elk	36
upland birds	29
Dispersed Recreation	14
Wilderness Use	30
Camping (developed)	13

TABLE 24
Reported Recreational Activity on Three Stewardship Areas
(000 days)

Activity	Modoc-Washoe	Challis	East Pioneer
Fishing	169	10	34
Hunting			
Deer	27	4	5.5
Antelope	10.5	.4	.6
Elk	-	5.5	18.5
Sheep	-	.1	.1
Upland Birds	65	.8	.5
Dispersed Recreation	177	12	52.6
Wilderness	42	-	-
Camping	109	10.2	7.7

Source: ESP Review Draft.

APPENDIX 3

LIST OF INTERVIEWEES

Mr. and Mrs. K. Axline
Mr. and Mrs. R. Baker
J. Barnard
J. Bennets
G. Bradley
B. Britton
K. Brown
W. Burkhardt
Mr. and Mrs. G. Chivers
Mr. and Mrs. T. Chivers
Mr. and Mrs. T. Chivers
J. Clawson
R. Cleary
R. Cooper
D. Cosgrief
L. Delaney
A. Foss
J. Griswold
L. Hagener
Mr. and Mrs. C. Hahnkamp
J. Harris
J. Hawkins
Mr. and Mrs. W. Ingram
T. Irons
R. Jenkins
G. Jensen
H. Johns
F. Kambich
T. Kambich
M. Kaschke
J. Lacey
M. Lee
J. Maki
K. McCawley
R. McElvain
J. McIntosh
L. Meyer
C. Nemith
B. Osborn
D. Pence
C. Pierce
T. Rhinecker
K. Sanders
Mr. and Mrs. L. Schadler
L. Sharp

Mr. and Mrs. M. Smith
C. Spalding
D. Stewart and sons

R. Strickland
D. Thayer
D. Tidwell
S. Torrey
F. Toupal
D. Vale
K. Walker
R. Westerman
N. Zufelt

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